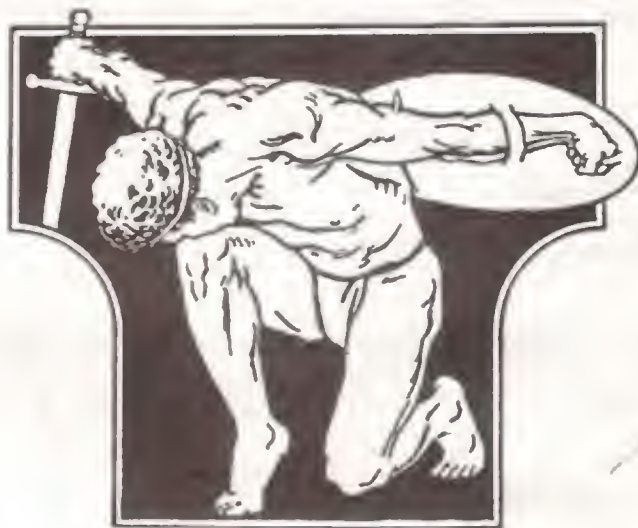


ANATOMY AND DRAWING BY VICTOR PERARD

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Students' League, New York City—Painter and Illustrator.



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DEDICATED TO
MY WIFE ERNESTINE PERARD

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OVER A THOUSAND ILLUSTRATIONS

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PREFACE

The purpose of this book is to present in a simple and direct manner the subject of anatomy as it is applied to Art. As little text as possible has been used, and much dependence has been placed on pictorial representation because the latter are a more direct means of impressing the artist with construction and form. For this reason this work has been copiously illustrated, often showing various views of the same structures and action.

To the beginner the study of anatomy is too often dull, prosaic and difficult and this is due, in large part, to the fact that many text books on the subject contain insufficient descriptive drawings. Even though the subject plows through many pages of text, he often fails to visualize the subject properly. Therefore it has been endeavored to substitute

illustrations for descriptive text whenever practical. The drawings have been arranged in groups for the purpose of comparison, and in this way the eye becomes accustomed to observe much which otherwise might escape attention.

To express outward form correctly requires a knowledge of the internal structure, that is, of the bones which compose the framework and define its proportions and of the muscles and tendons which direct its action.

Every figure artist finds sooner or later, as he advances in his artist career, that his work needs strengthening through a well grounded knowledge of anatomy. The great masters of the past realized this and their grasp on the fundamentals of anatomy is reflected not only on their finished works, but in such of their preliminary sketches as are still preserved.

The ability to construct figures correctly from the imagination rather than to depend entirely on models is a distinct aid to the draftsman and to the sculptor. The student of anatomy should therefore test his skill by making memory drawing and by applying his knowledge to compositions of his own fancy.

When working from living models, the artist will find that his knowledge of anatomy will enable him to analyze and interpret the forms before him in a more understanding way

then he could without such information. It will develop in him greater powers of observation. An understanding of anatomy is an instrument in the mechanics of Art: a means to be employed to assist but never allowed to dominate. The artist must learn properly to evaluate his anatomical information and to know the part it is to play in the development of his art. The studies he makes will then be done more intelligently and with better draftsmanship as an inevitable result.

VICTOR PERARD



NOTES ON PROPORTION

Since proportion is the comparative relation of one thing to another, some standard or unit of measure must arbitrarily be established. In Art, this unit is known as the "head" which is the distance from the top of the skull to the tip of the chin. The illustrations in this book are based on the proportion of seven and a half "heads" to the height of an erect figure. The use of this standard will obviate much

descriptive text. It is well, however to bear in mind that this standard of proportion is modified by such elements as race, sex, age and physical differences peculiar to the individual. For this reason the following notes on proportion are grouped under the heads: Male, Female, Children and General Observations.

Proportions of the Male. The greatest width of the male figures is at the deltoids, a little below the shoulders and the width here is about two heads.

The width between the hips should equal one and one half heads, and the width between the nipples one head.

The height of the figure, seven and one-half heads, should approximate one "head" for the head, two and three-quarter heads for the neck and trunk, and three and three-quarter heads for the lower extremities.

From the finger tips to the elbow should measure two heads.

Proportions of the Female. The bones of the female are shorter and have less rough surface than those of the male. The sternum or breast bone is shorter and more curved and the pelvis is broader and shallower which gives a greater width to the hips. The sacrum is wider and projects at an angle backward.

The posterior superior iliac spines and the anterior iliac

spines are further apart than those of the male. The distance from the rib cage to the pelvis is greater due to the shallower and broader pelvis.

There is less distance from the crest of the iliacs to the great trochanters of the hips, because the anterior iliac spines are spread out and lower, and further apart. In the female figure the Poupart's ligaments and the furrow of the groin are more horizontal.

The shoulders are narrower and the collar bones (clavicles) straighter and shorter thus giving a more graceful and longer neck and more sloping shoulders in comparison with the square shoulders of the male.

The arms are shorter in proportion to the trunk which is due to the shorter humerus bone of the female, and because the humerus bone is shorter, the elbow is higher.

Variations in the length of the female leg are more frequent than those of the trunk and so it is more difficult to judge the height of the female figure when seated. But the length of the torso is proportionately longer than in the other sex. The legs are shorter and the skull smaller.

The center of the female figures is above the pubic bone while in the male, the center is about at the pubic bone. The width of the female hips is about the width of the chest wall plus that of one arms and is greater than that of the male of the same height. The fact that the female sacrum is at a greater

angle than that of the male and that there is more fat on the buttocks gives these a greater diameter.

The female abdomen, is more rounded and the thighs are thicker from the back to the front than in the other sex.

Proportions of Children. The child of three is about one half the height of the adult, and at ten, about three-quarters the height of the adult. As the child grows older the relative sizes of the head and the trunk change. At twenty-five the figures is full grown.

At birth the centre of the figure is a little above the navel, at two years at the navel and at three years the center is level with the iliac bone.

With advancing age this point gradually lowers depending to great extent on the length of the legs.

General Observations. The clavicle bone continues to grow for a considerable period after the other bones of the body have attained their full development and therefore the shoulders are said to broaden

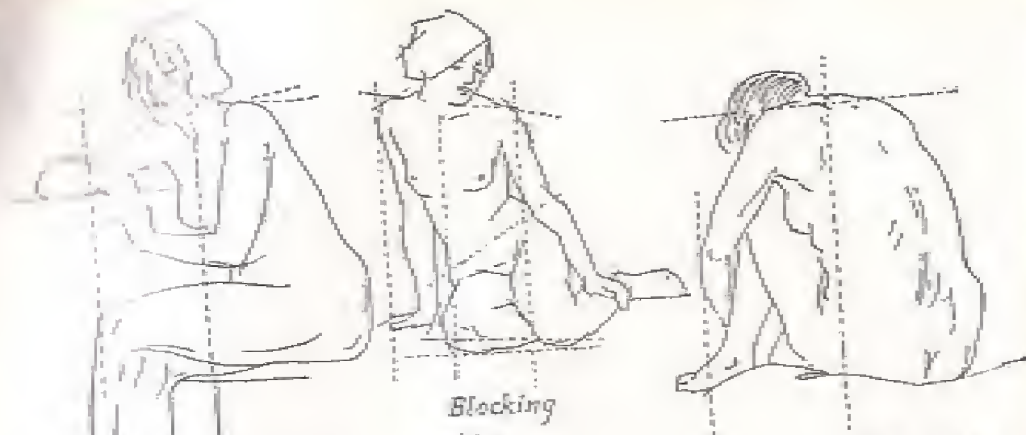
Only very tall people have a height of eight heads. Short people are seven heads or less. The muscles of the adult account for about one half the weight of the body.

The skeleton always provides the proportions of the figure with slight allowances for the padding between the joints, between each vertebra, and under the heel and foot. In old age the figure shortens due to the hardening and shrinking of the cartilages between the bones.



PART I
PROPORTION
AND
DRAWING

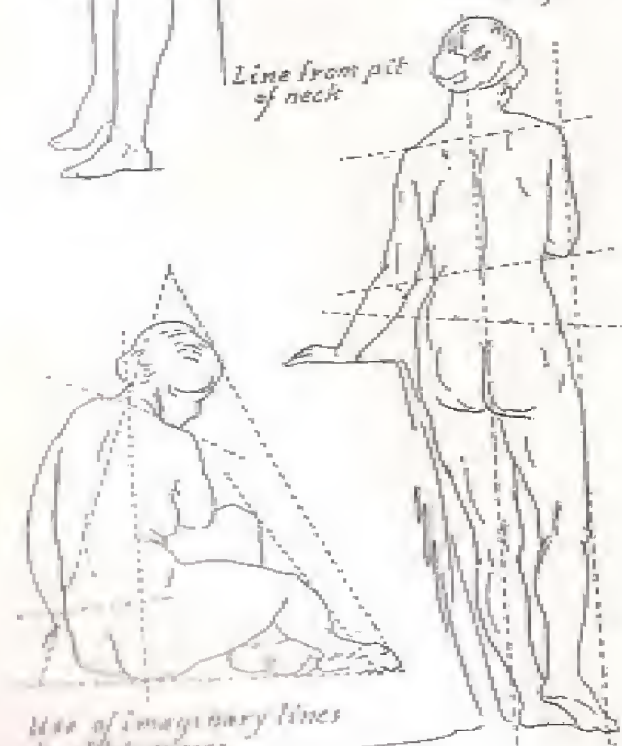




Blocking

Line from pit of neck

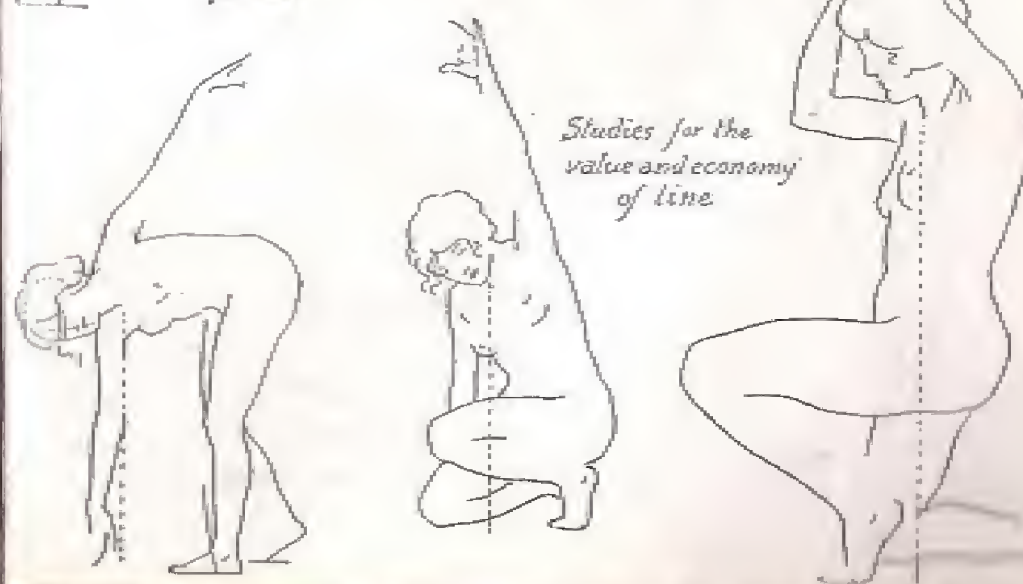
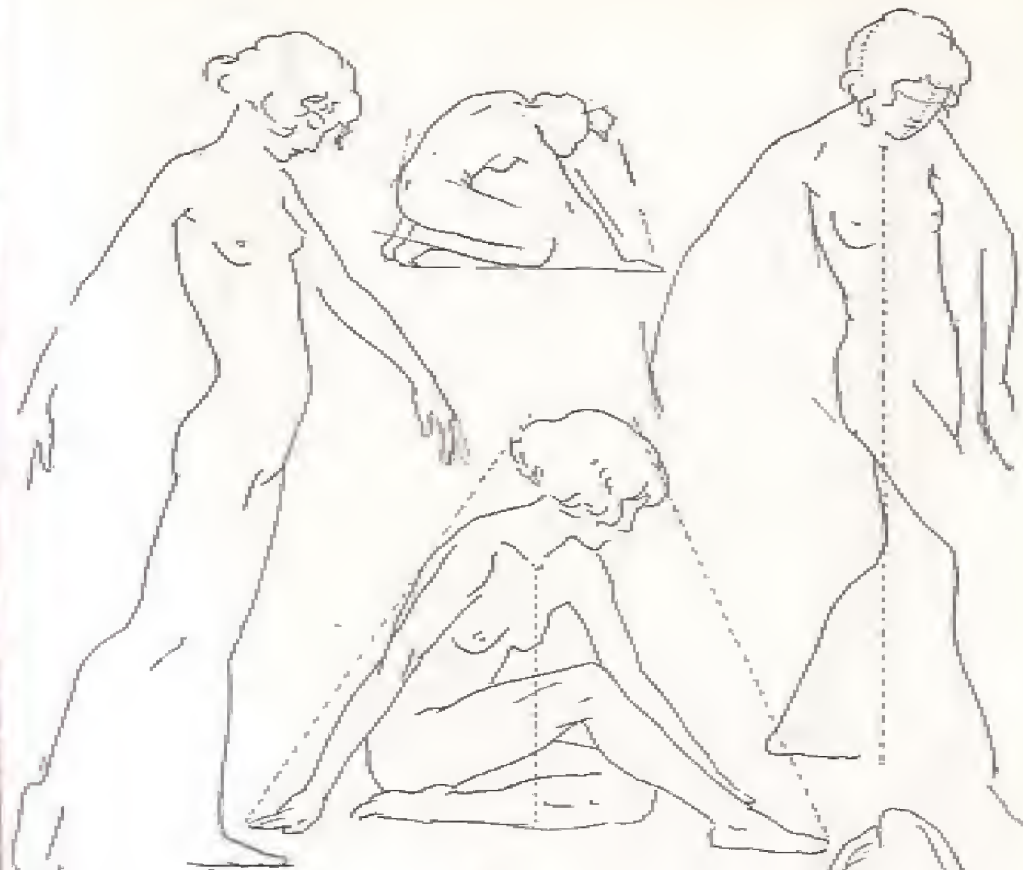
Line from seventh cervical vertebra



Use of imaginary lines to obtain angles

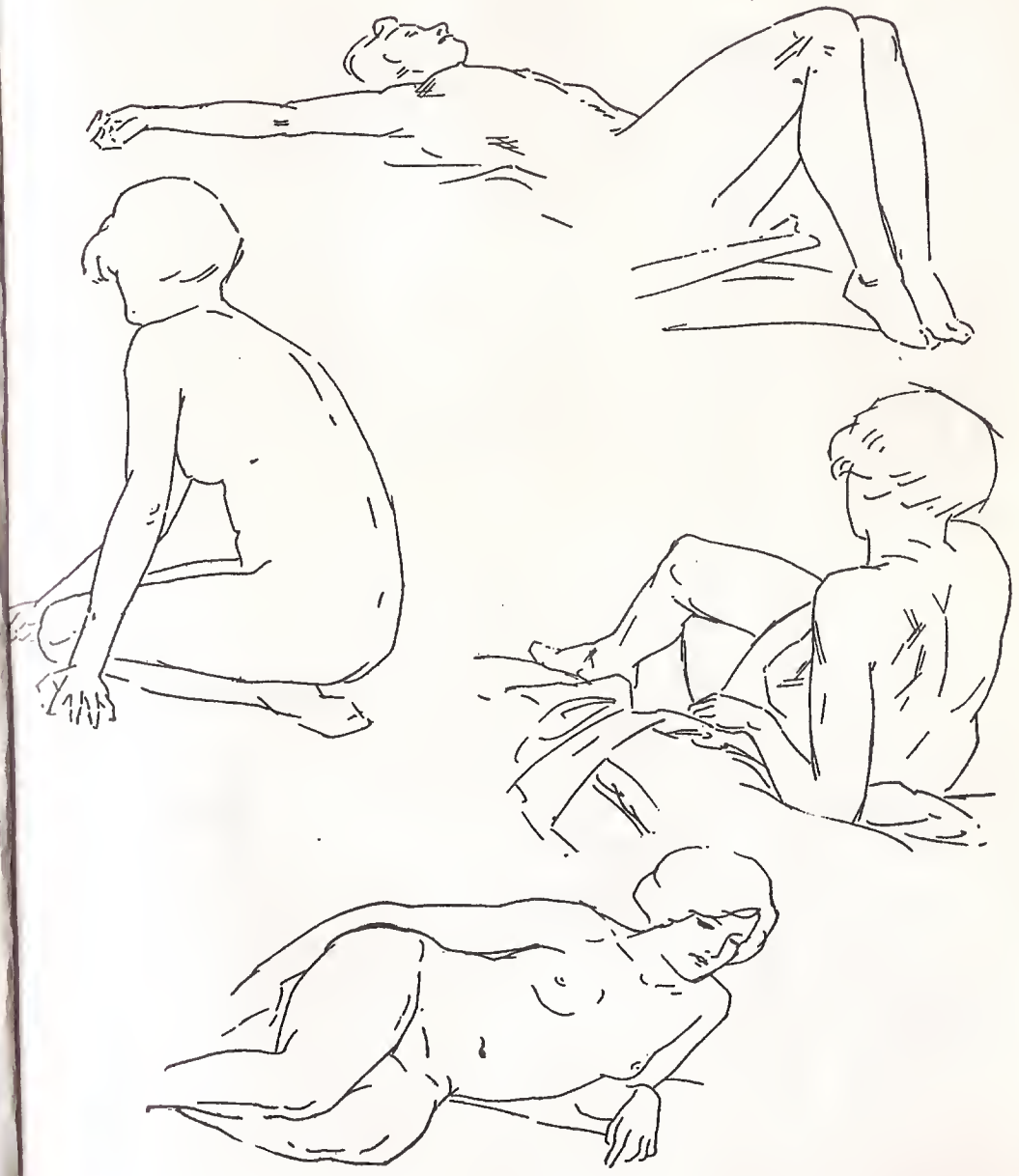
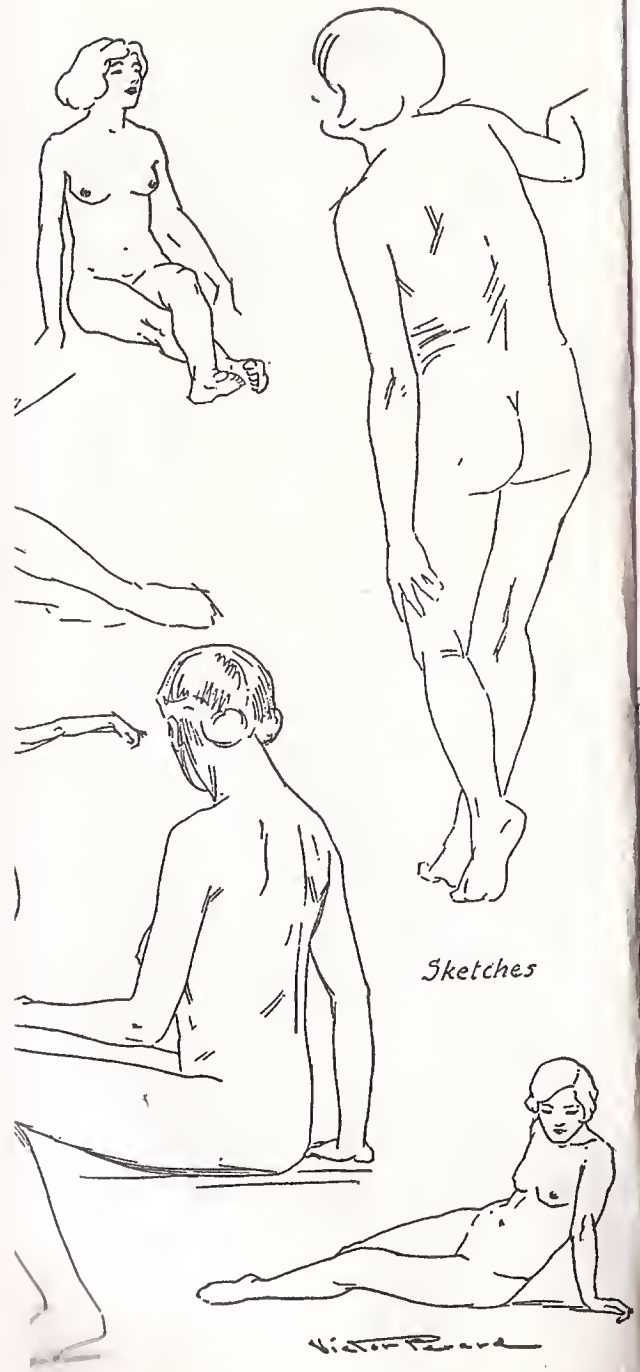


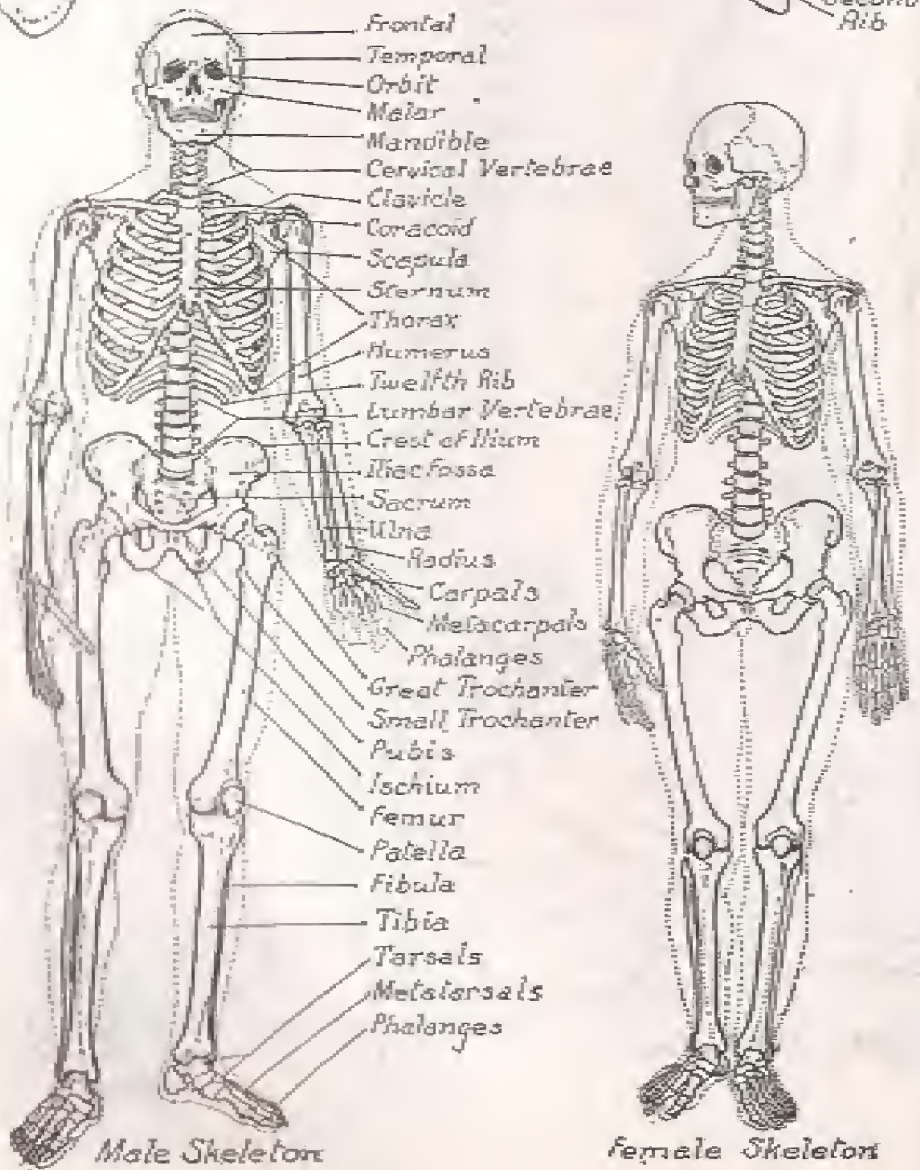
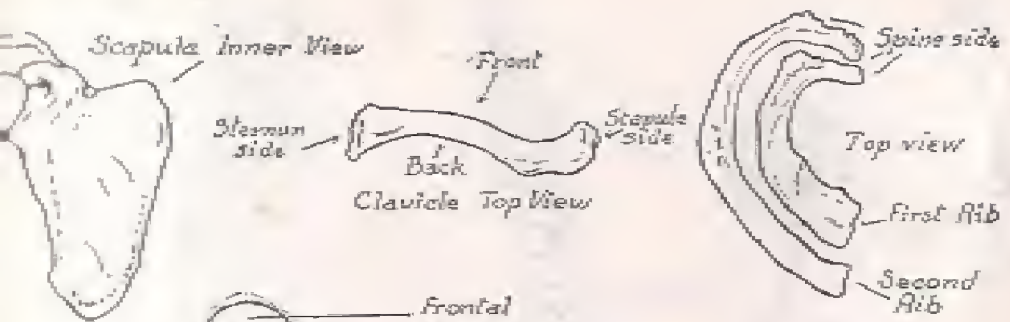
Impression



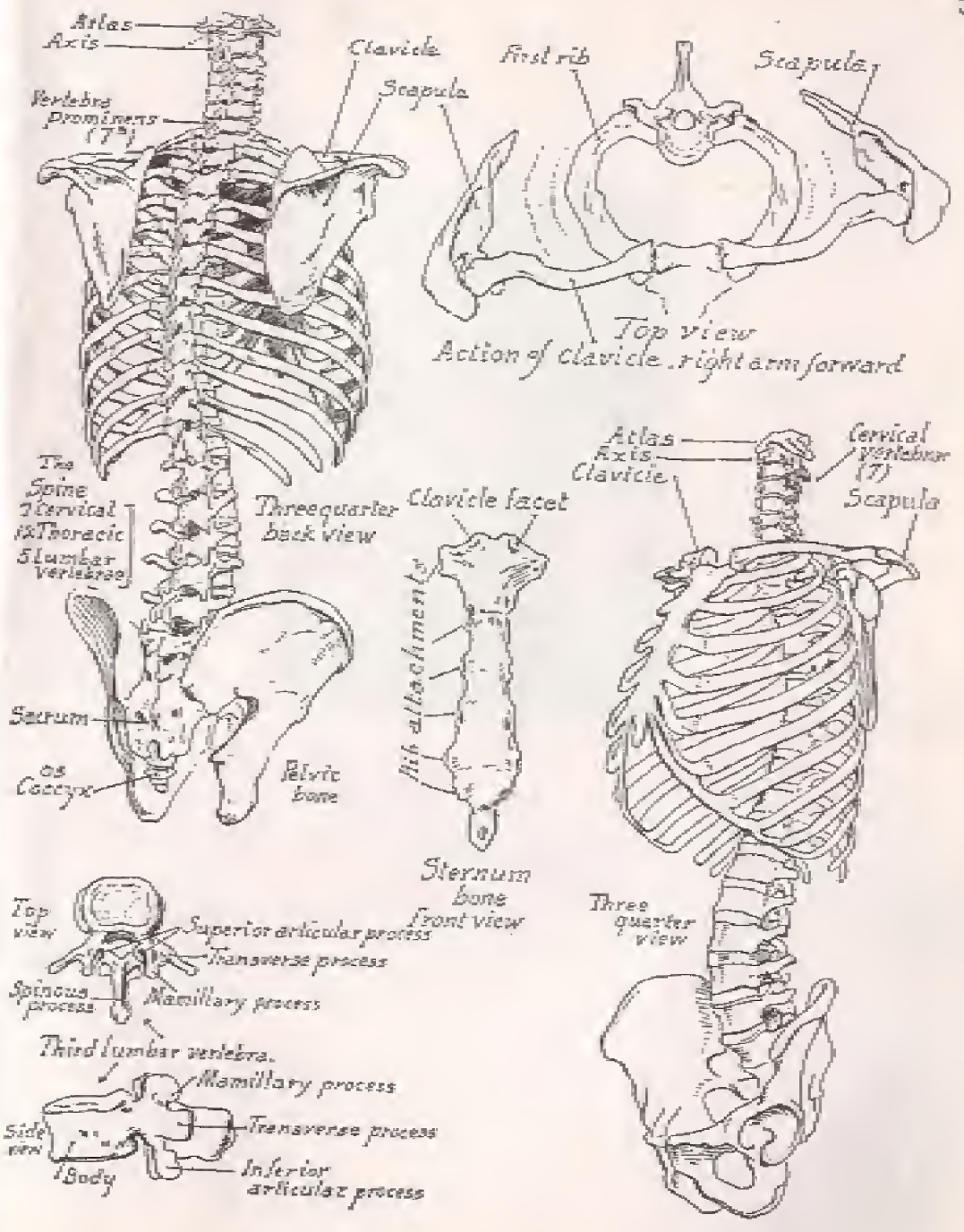
Studies for the value and economy of line

Robert Gordon



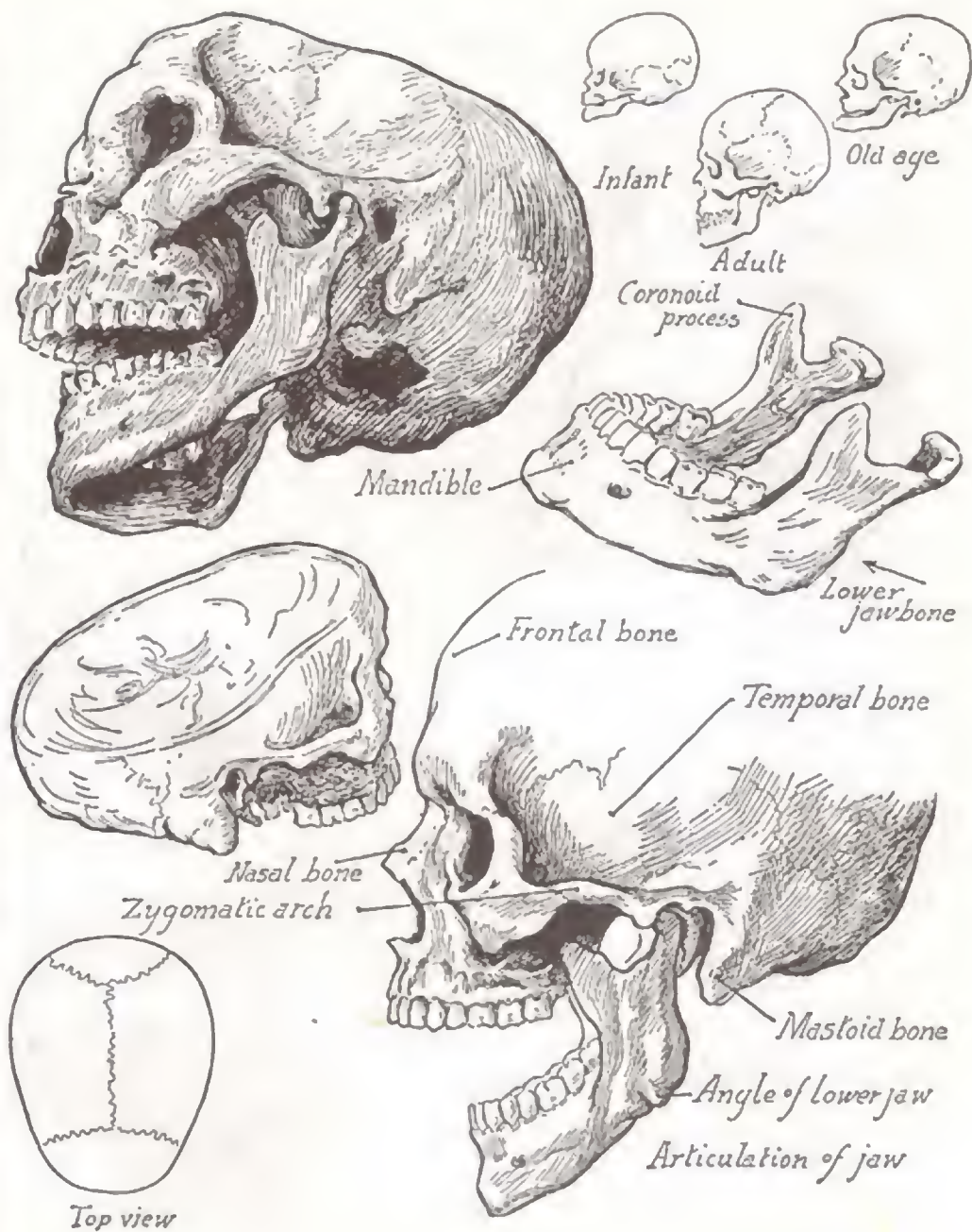


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- Small Trochanter
- Pubis
- Ischium
- Femur
- Patella
- Fibula
- Tibia
- Tarsals
- Metatarsals
- Phalanges

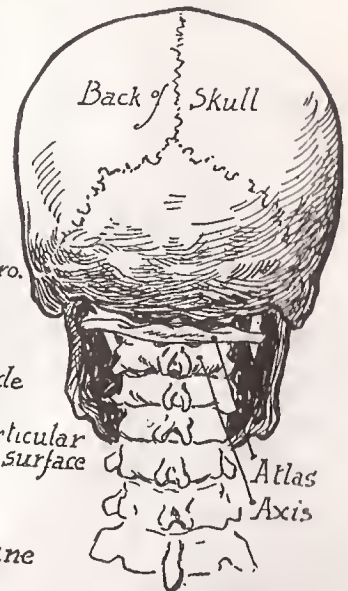
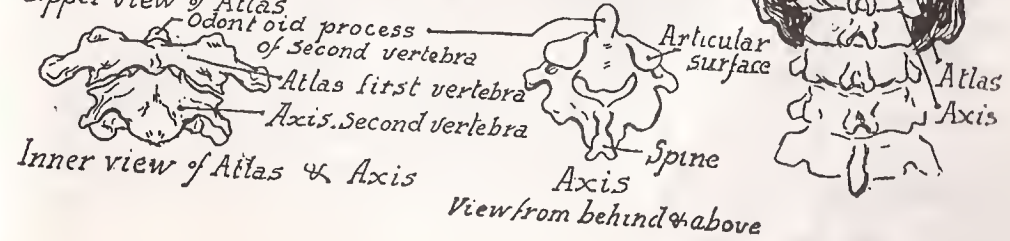
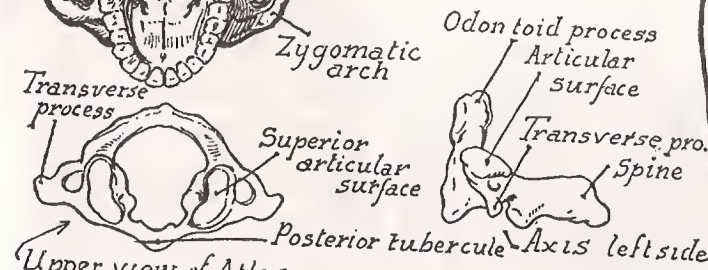
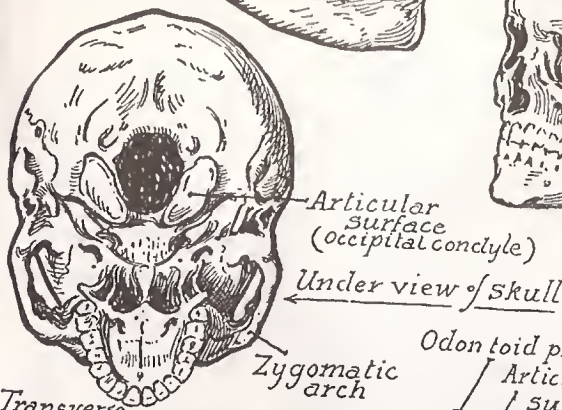
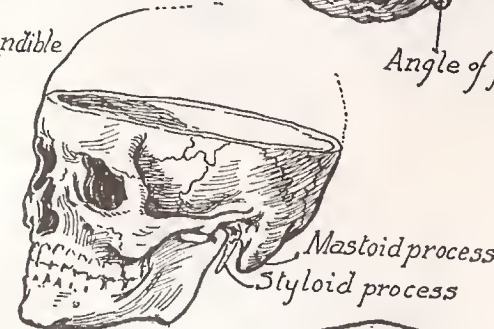
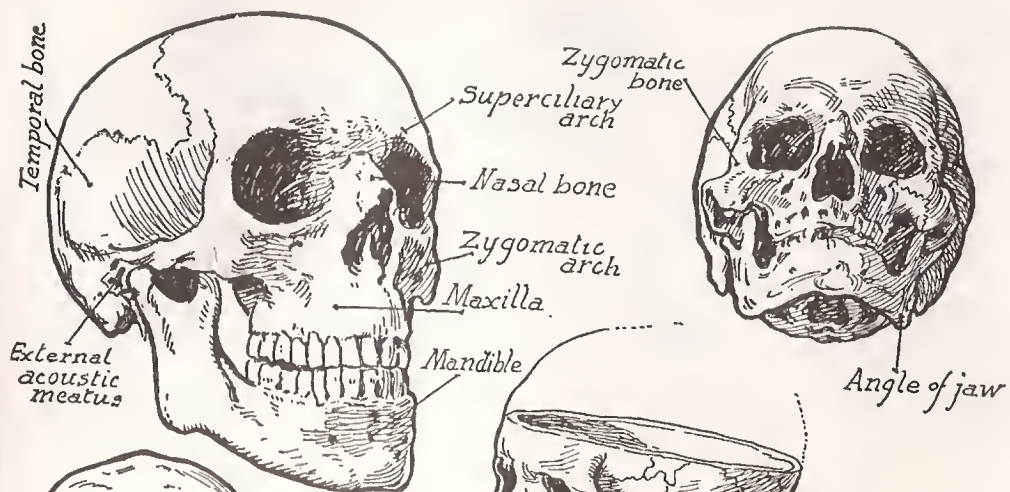
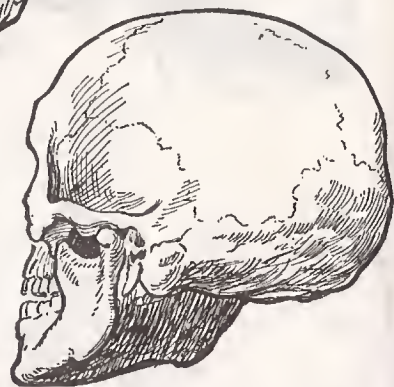
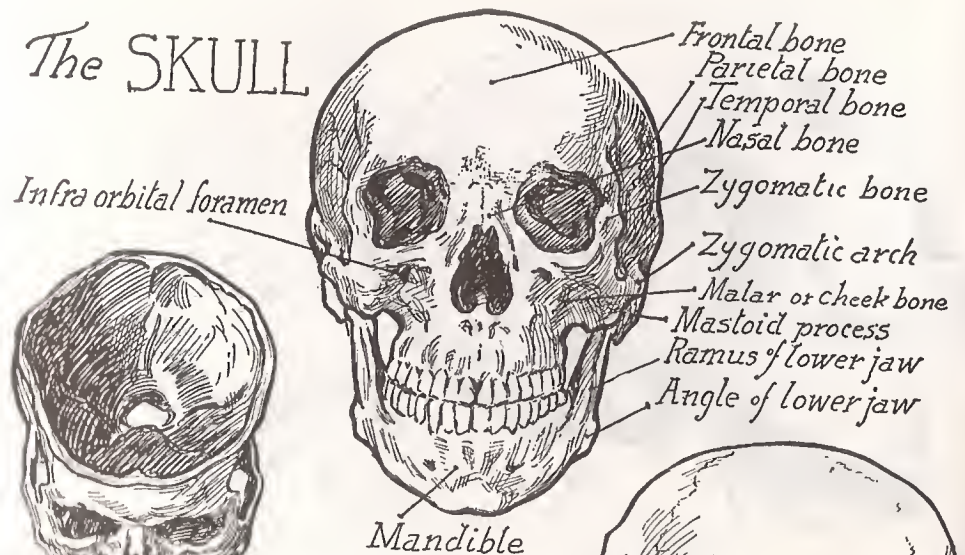


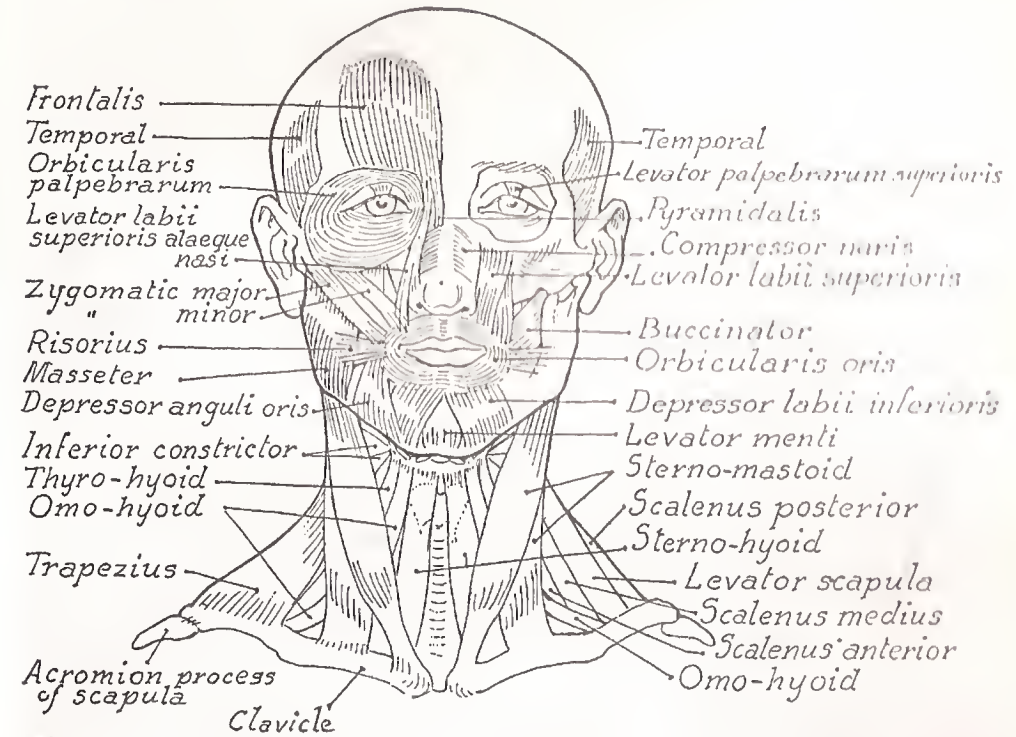
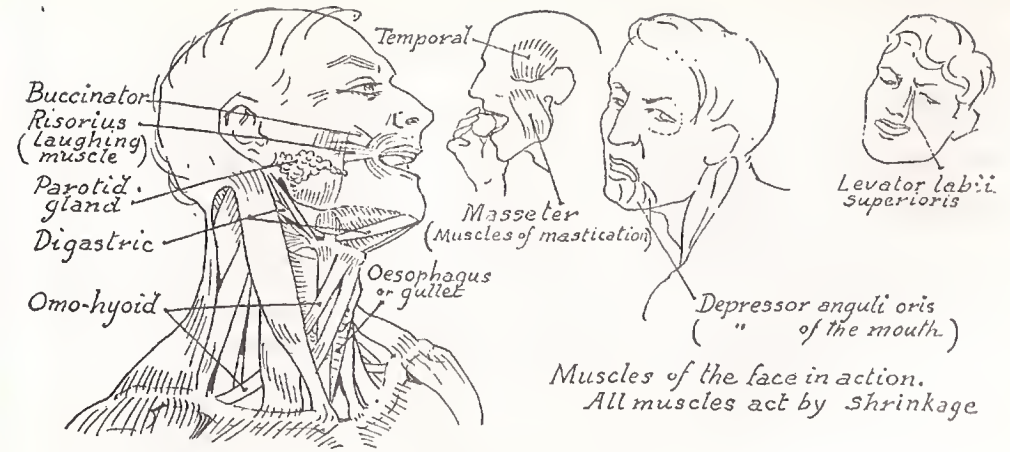
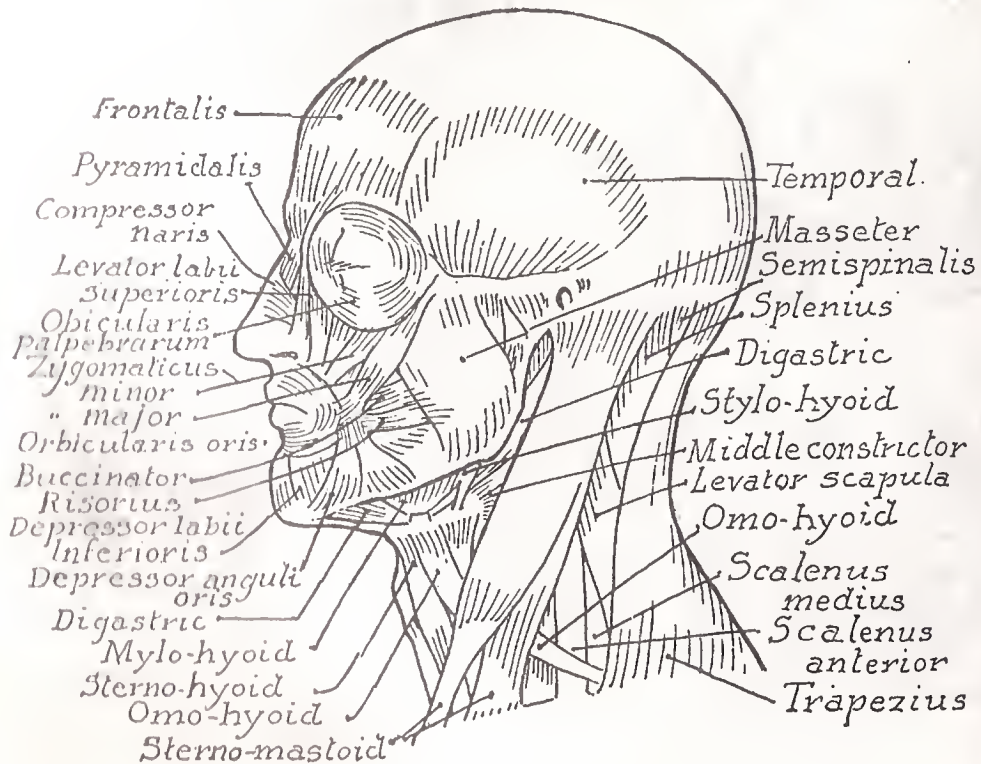
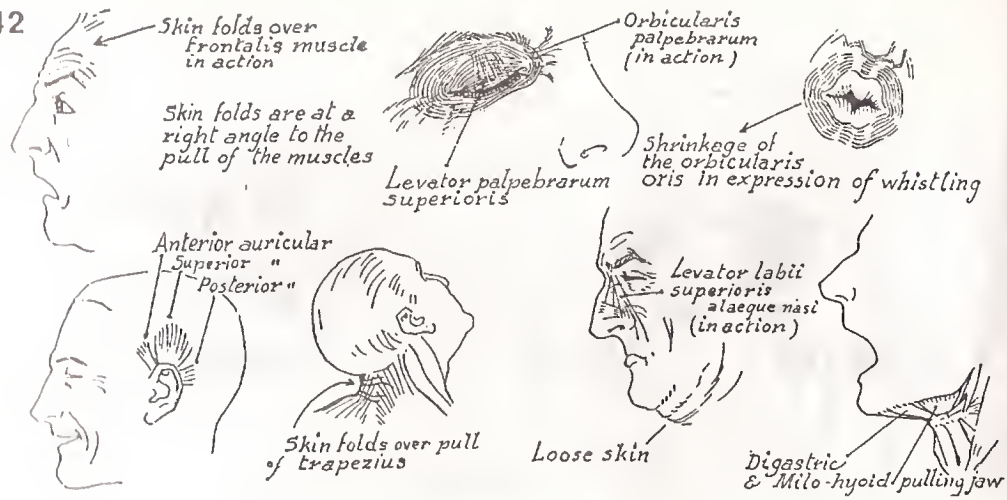


PART III
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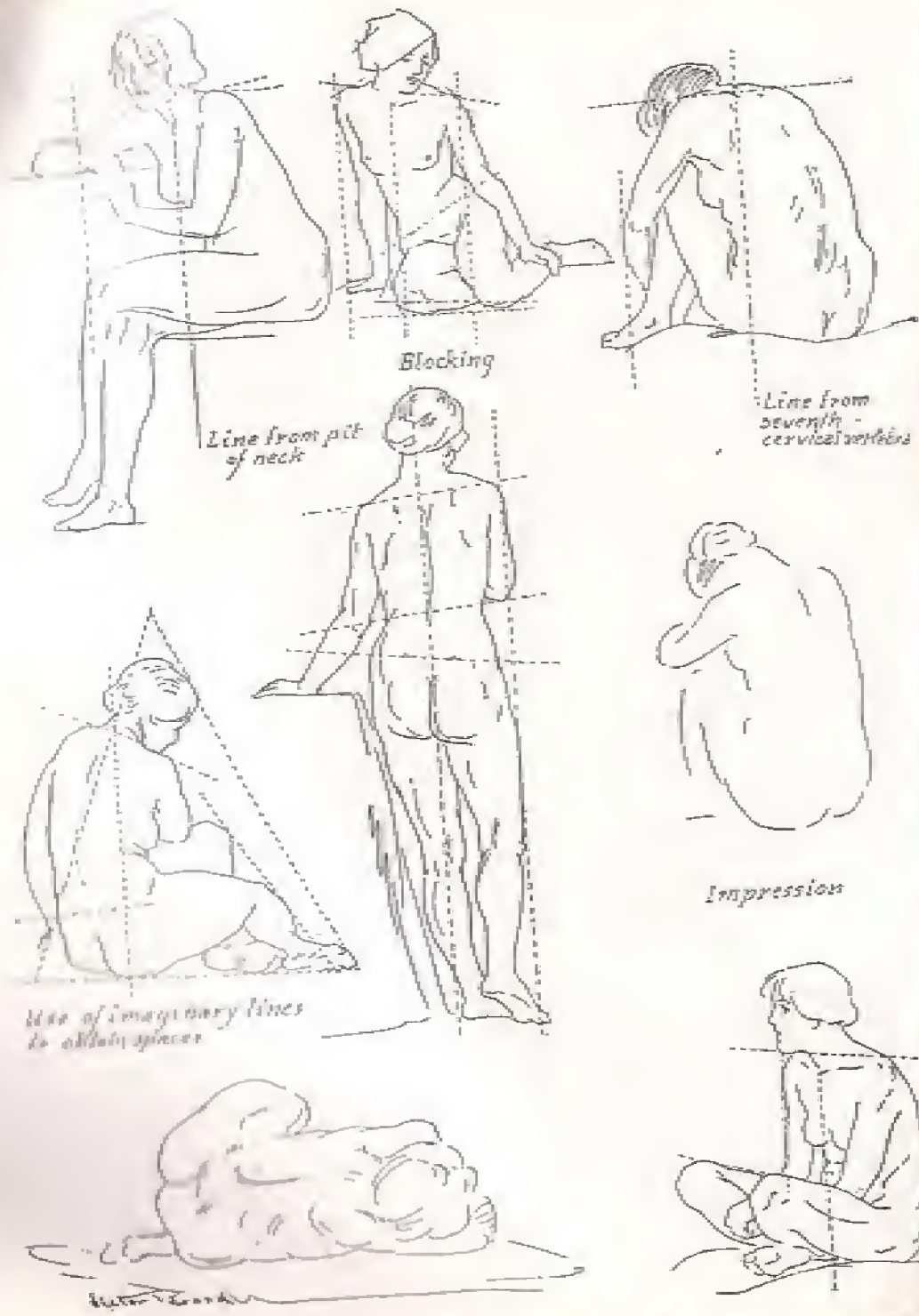


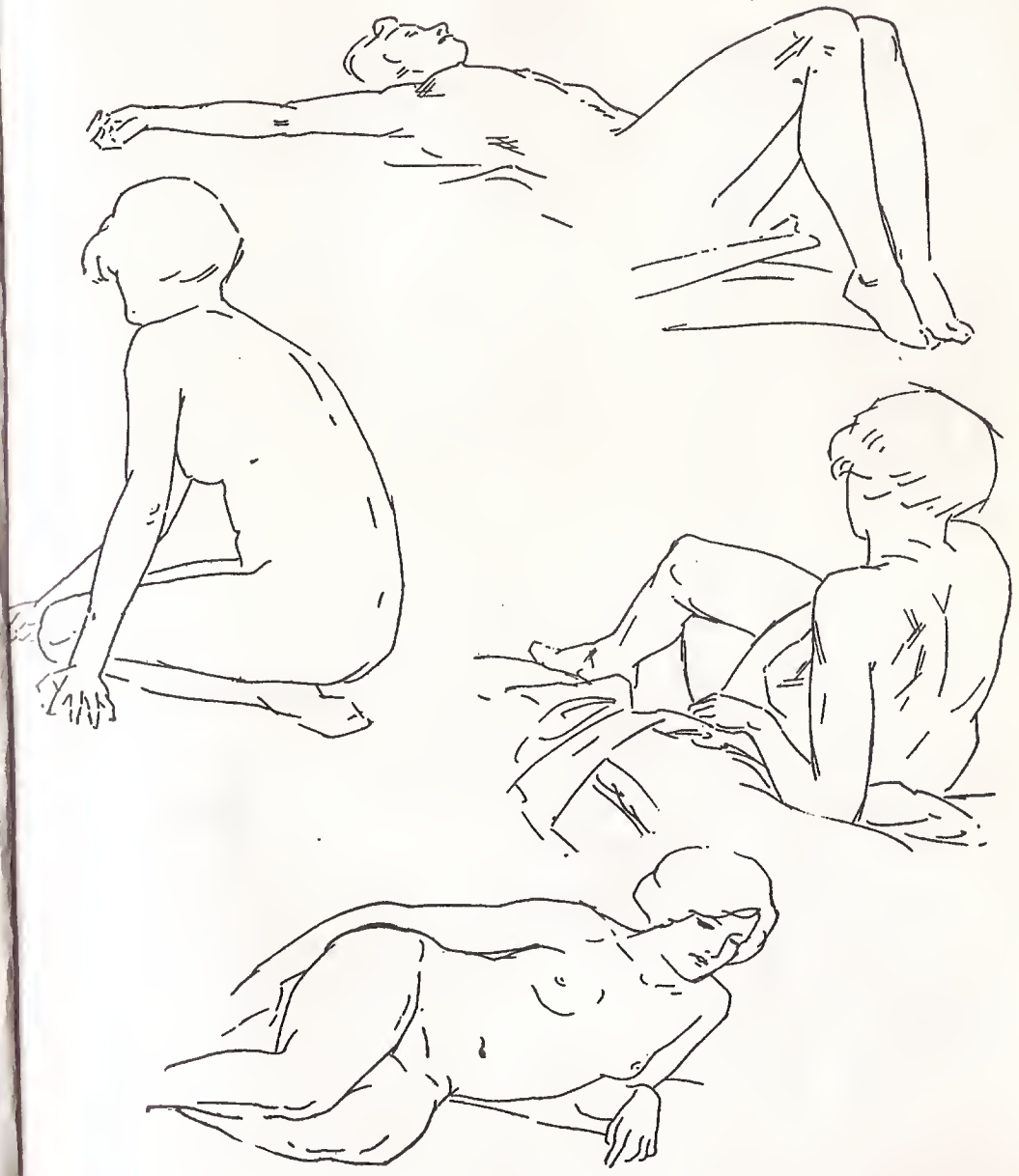
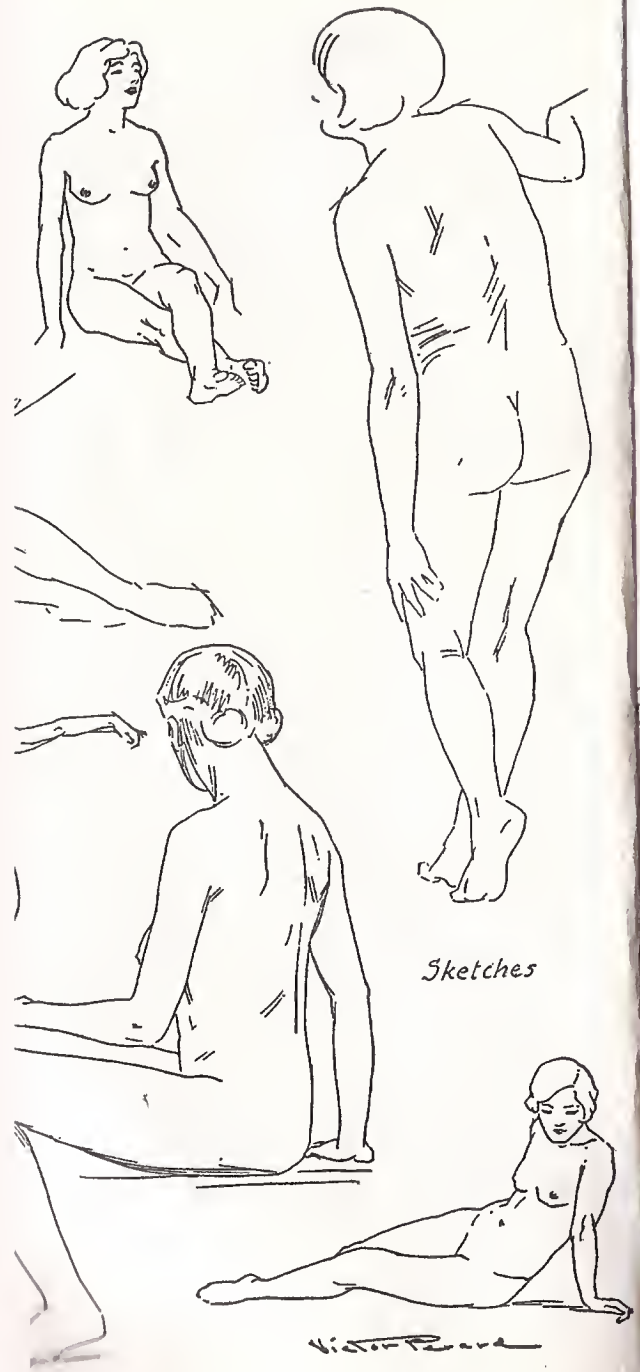
The SKULL

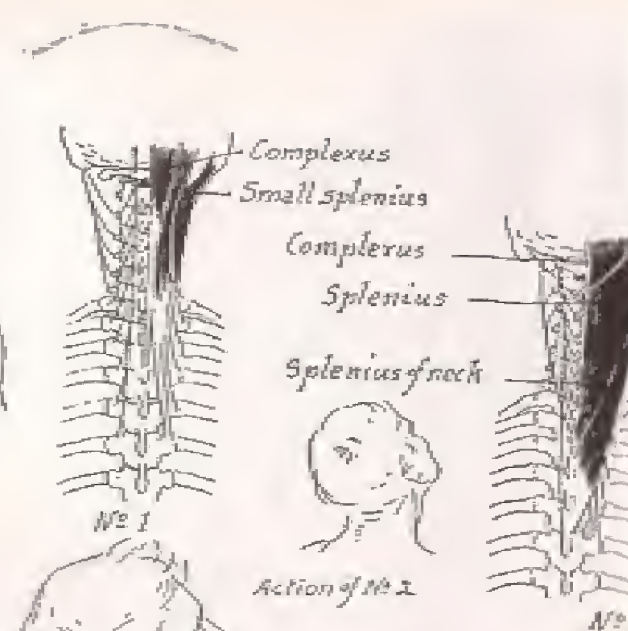
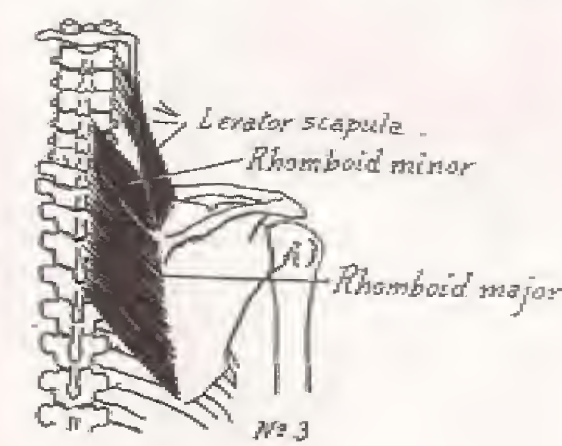
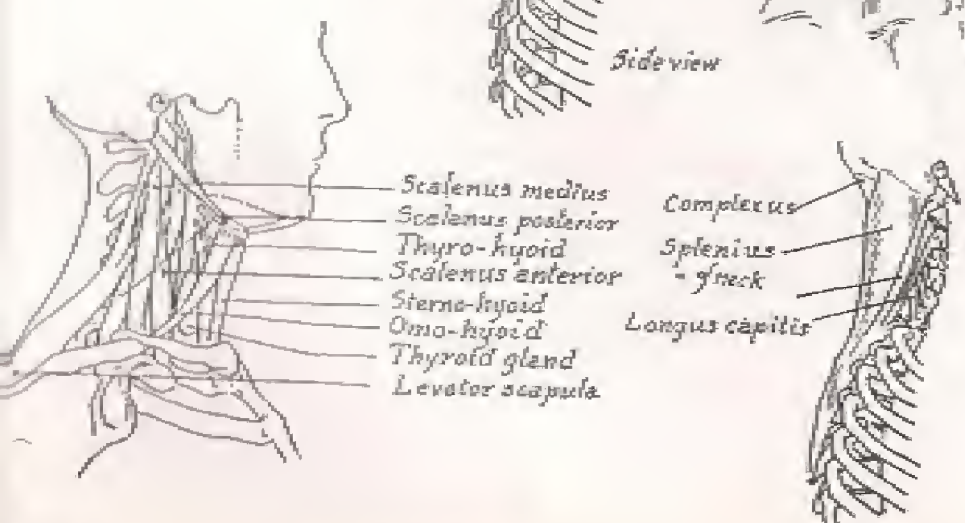
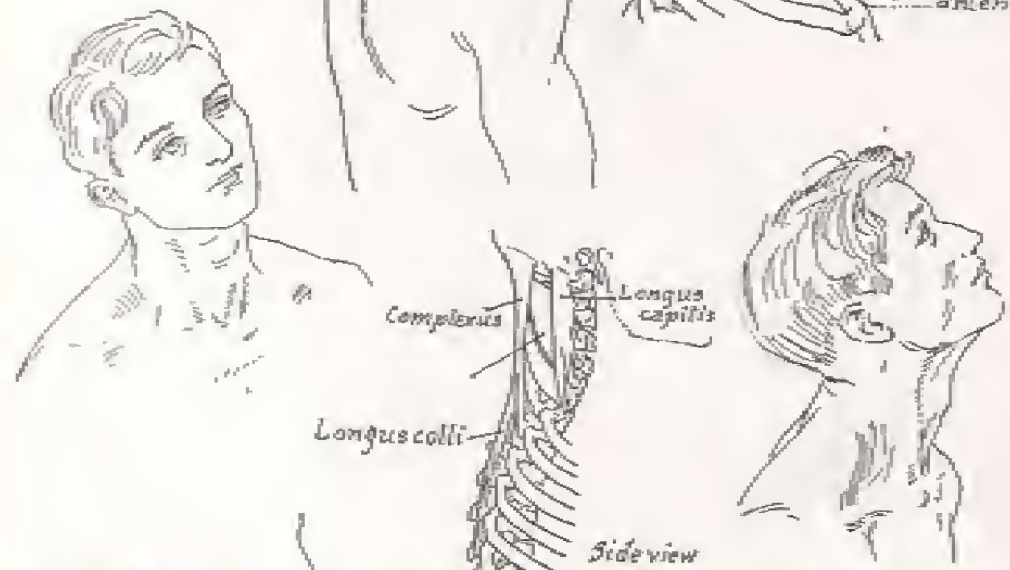
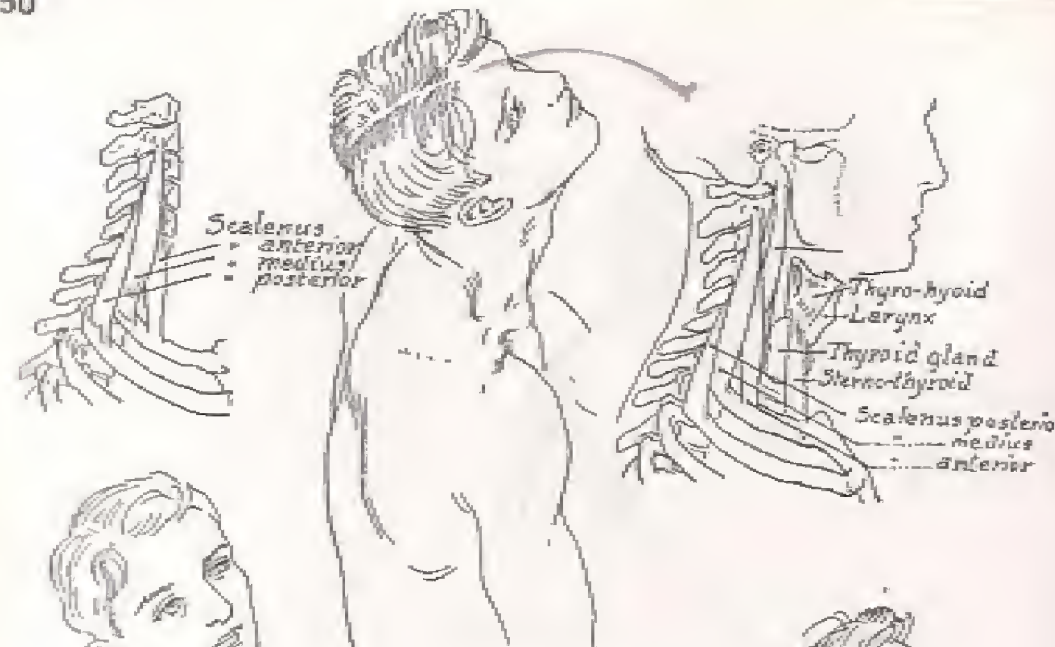




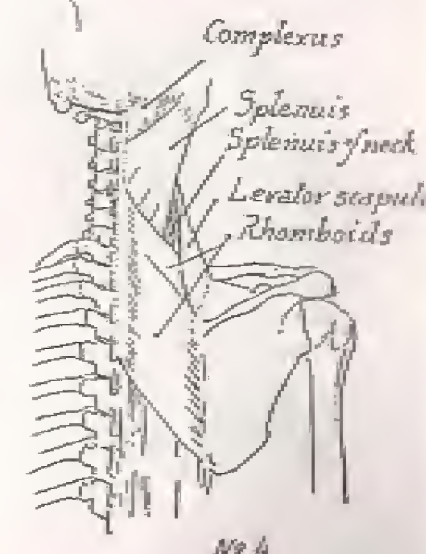
The underlying and the superficial muscles of the face and neck

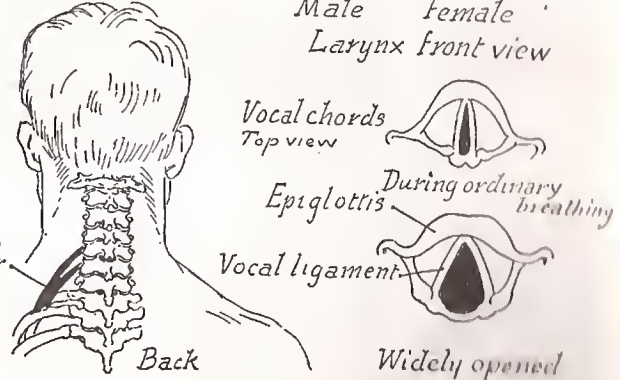
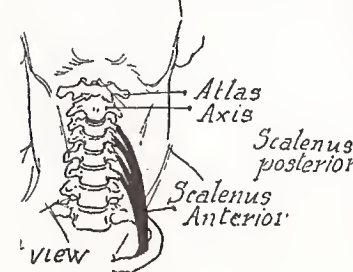
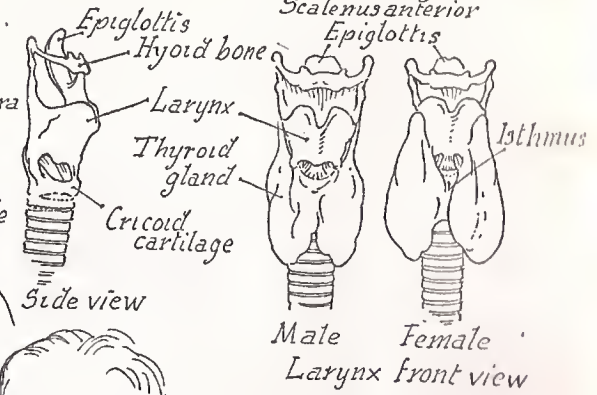
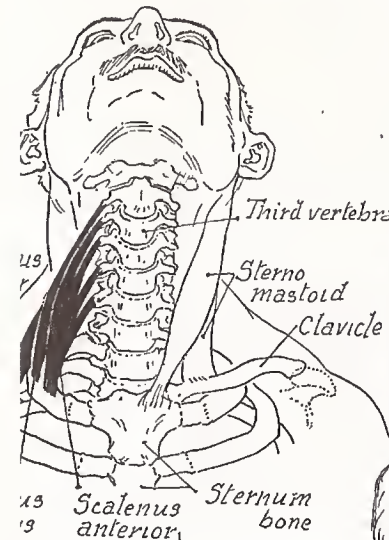
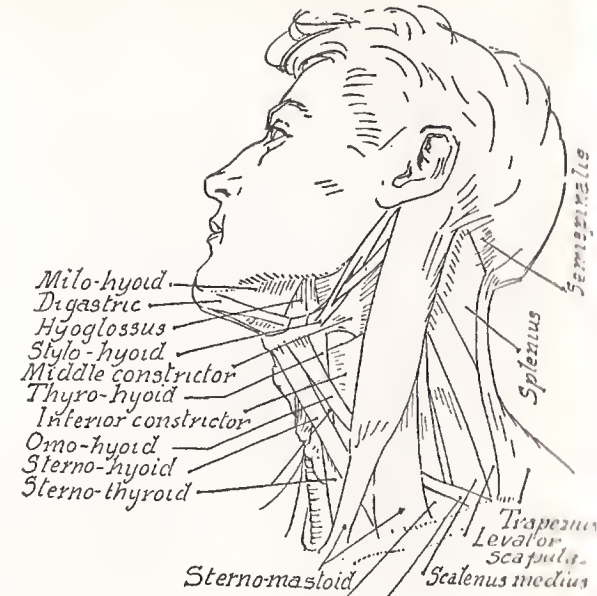
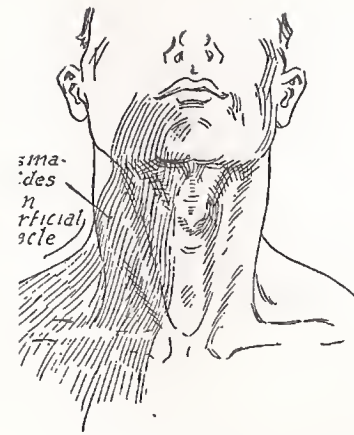


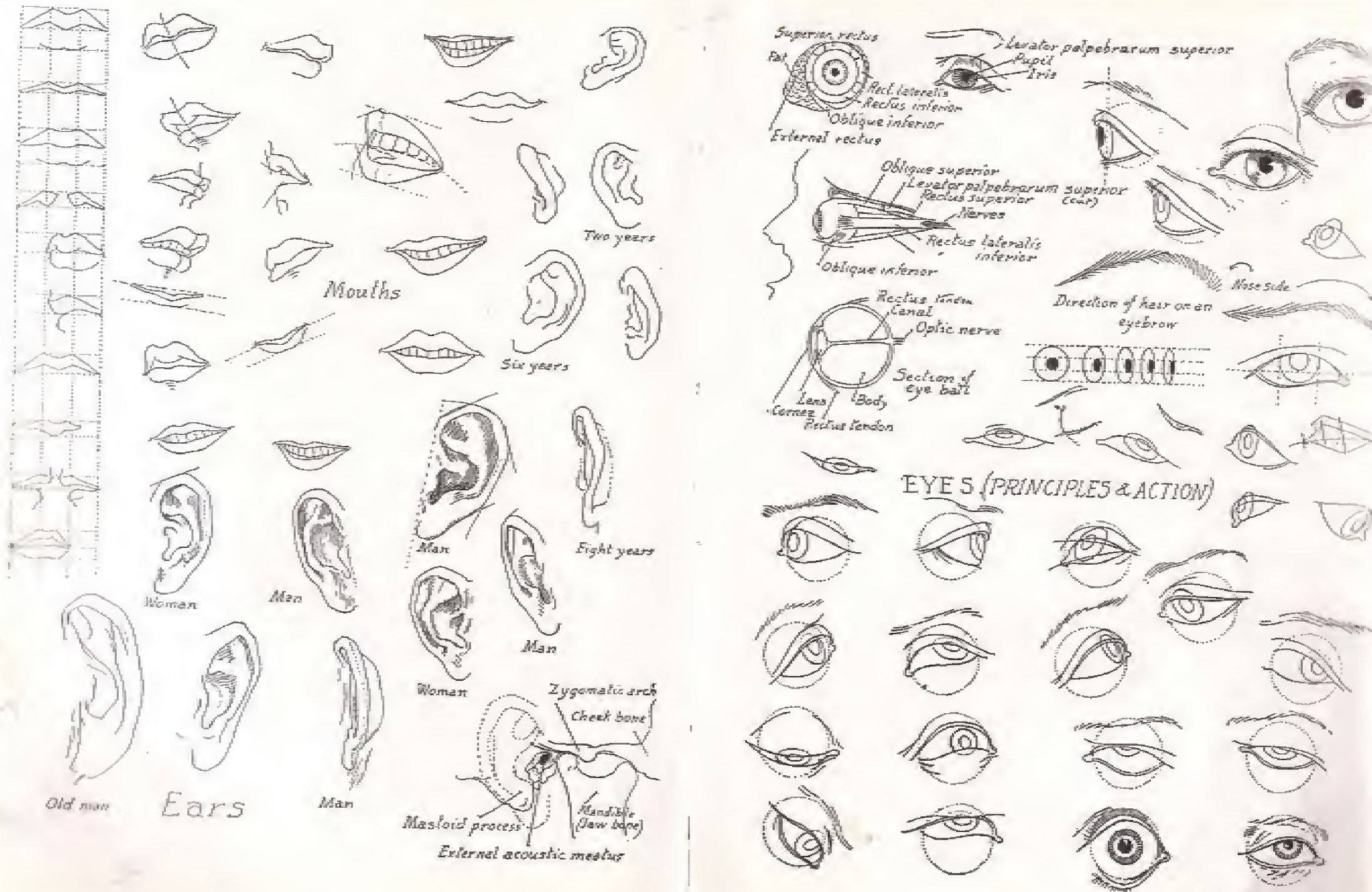


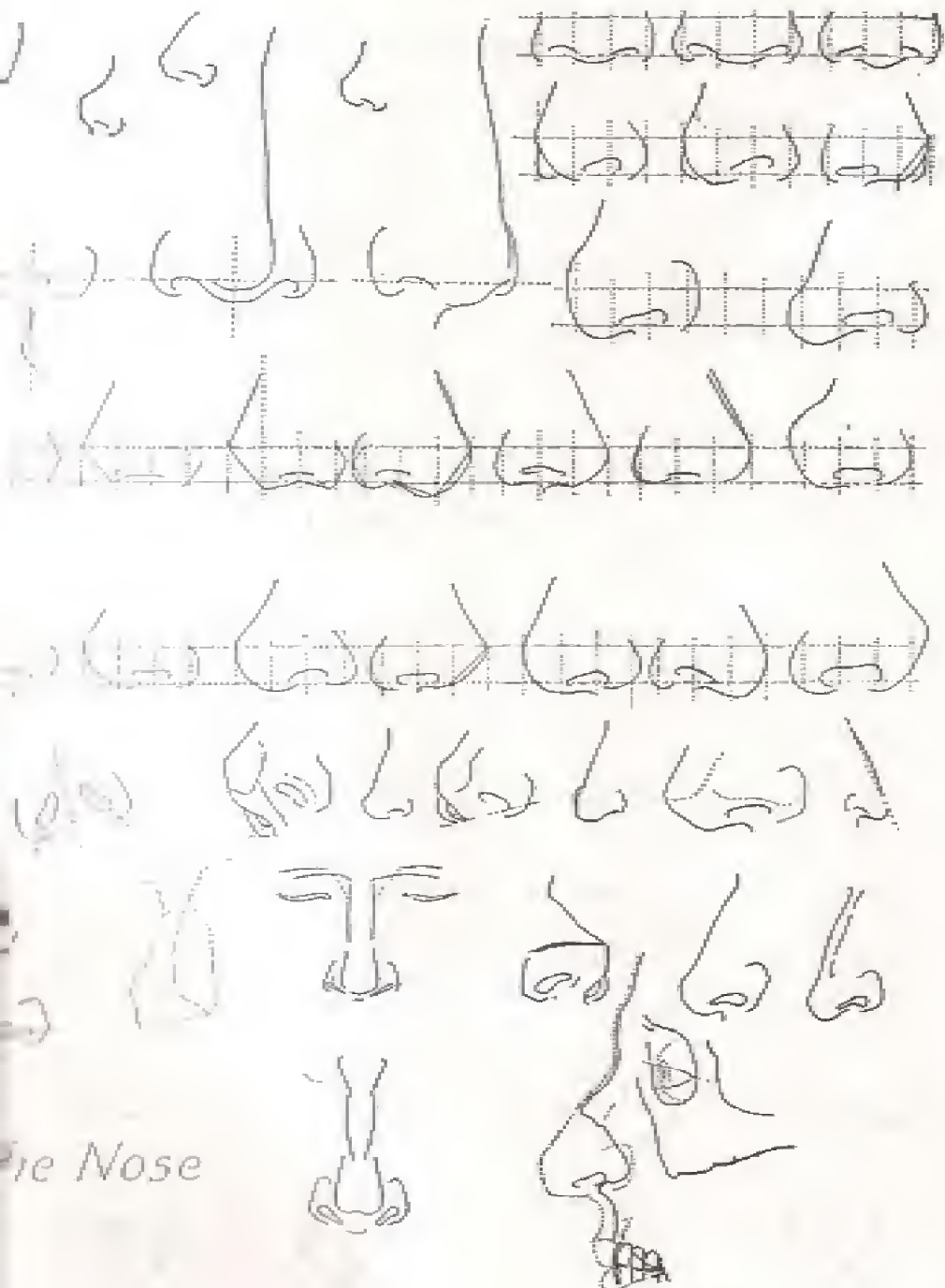


Muscles of back of neck









The Nose



Caucasian
(white race)

Protestant
type

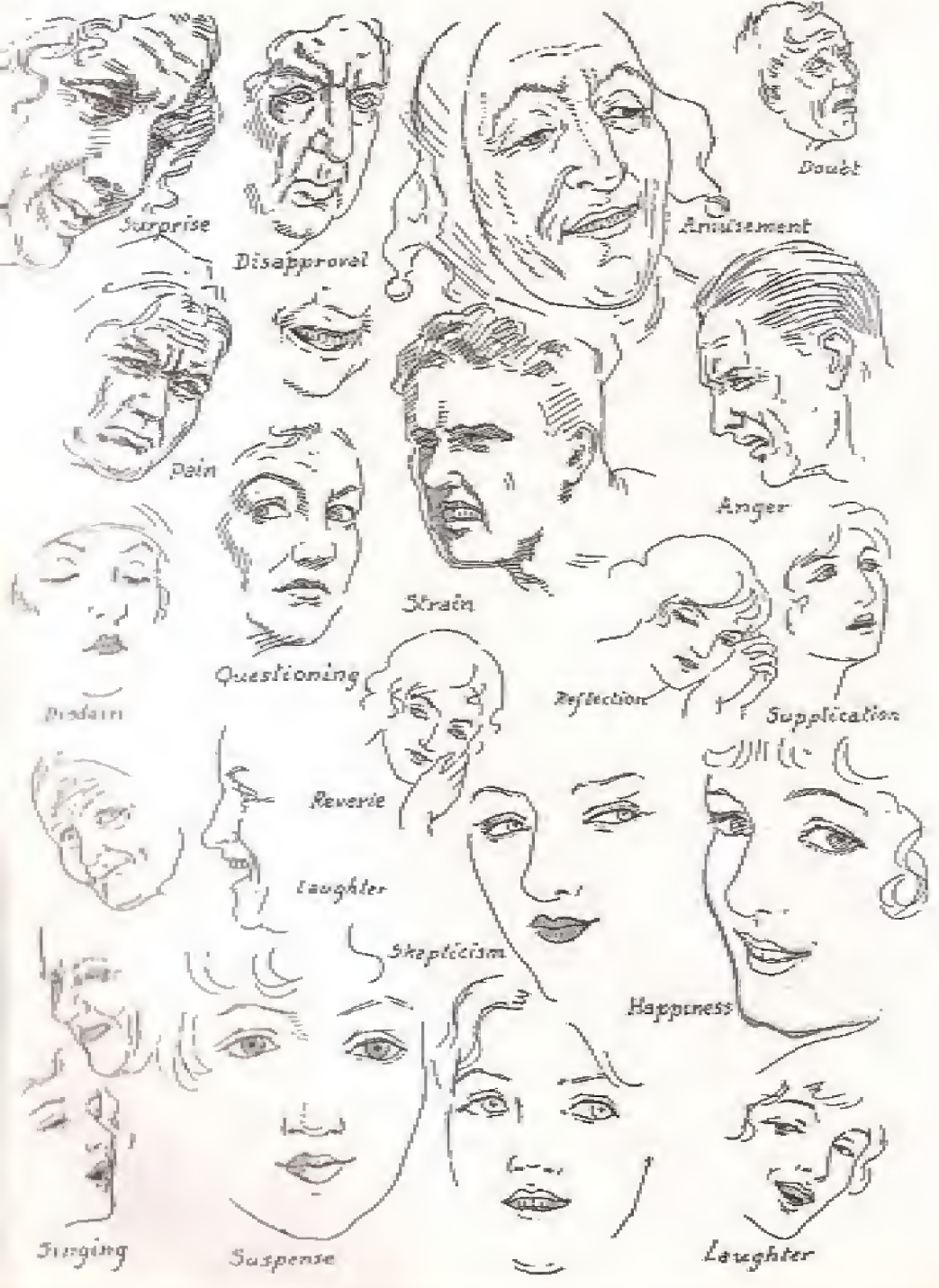
Mongolian
(yellow race)

Ethiopian
(black race)

American Indian
(red race)

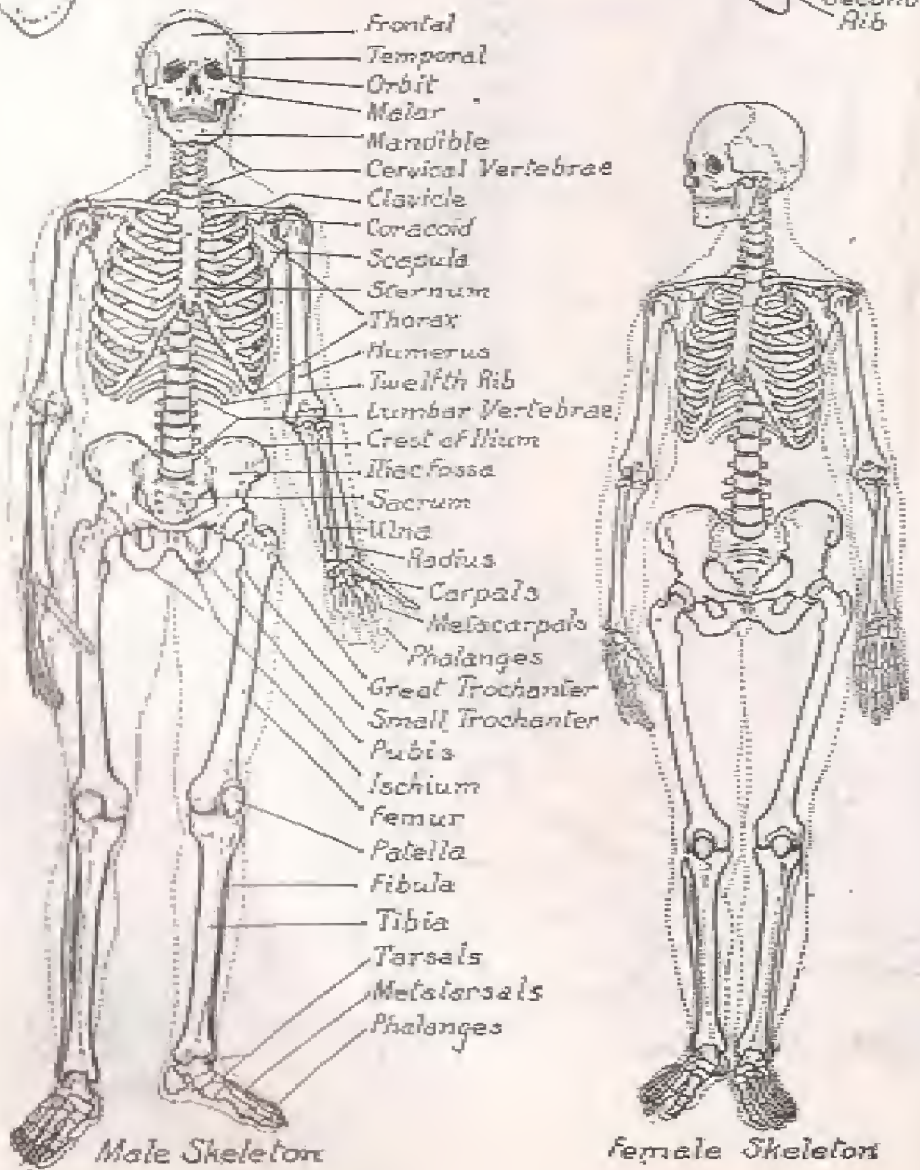
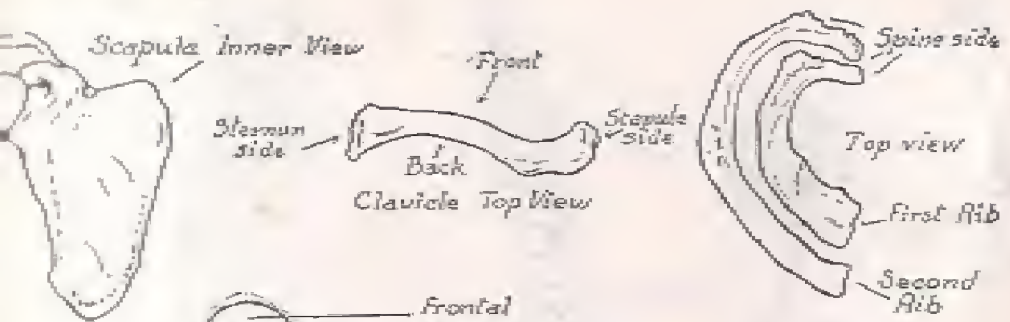
Malayan
(brown race)

The five races of man

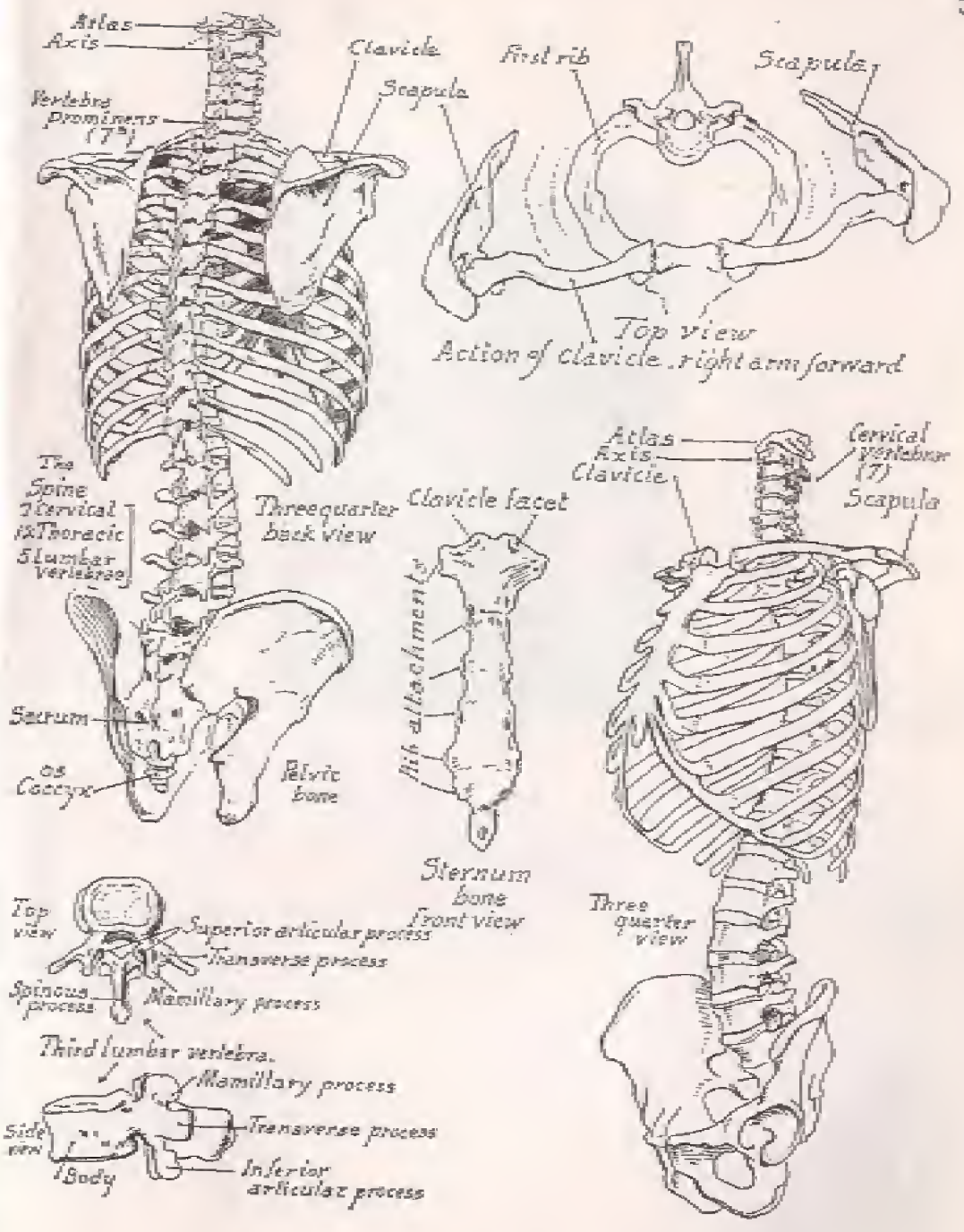




PART IV
THE TORSO

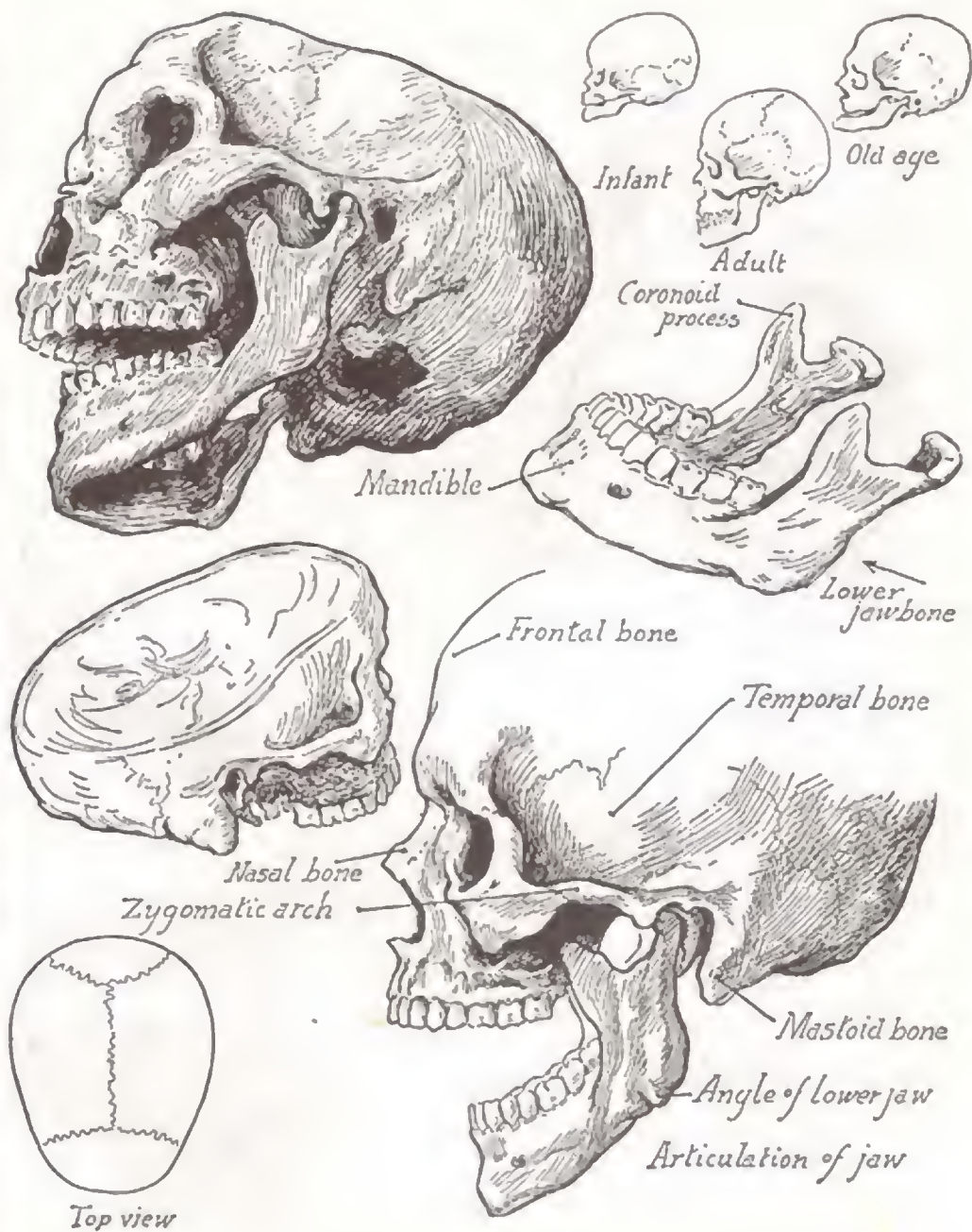


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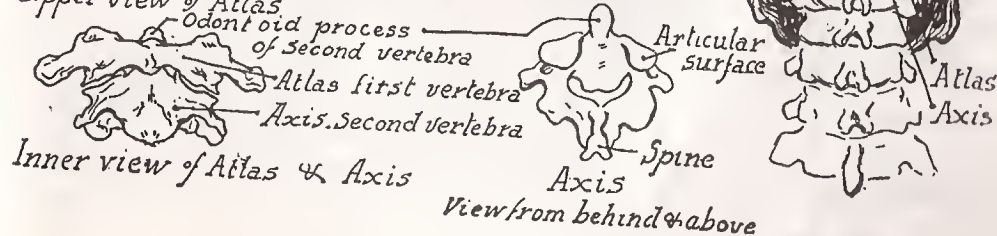
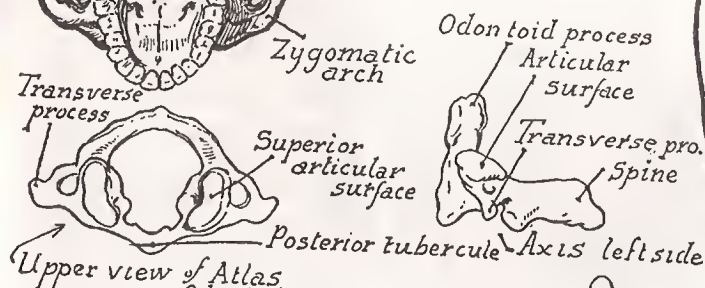
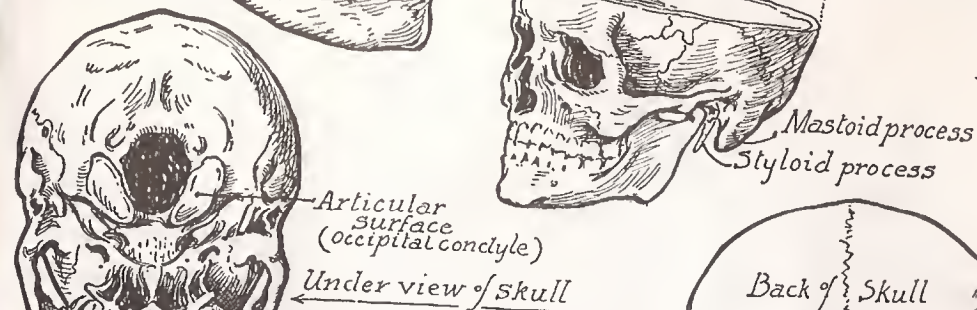
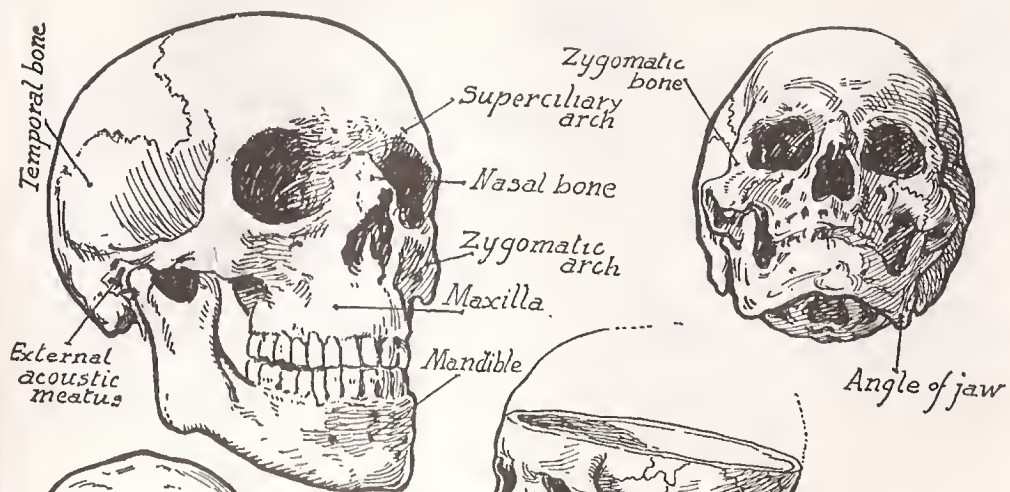
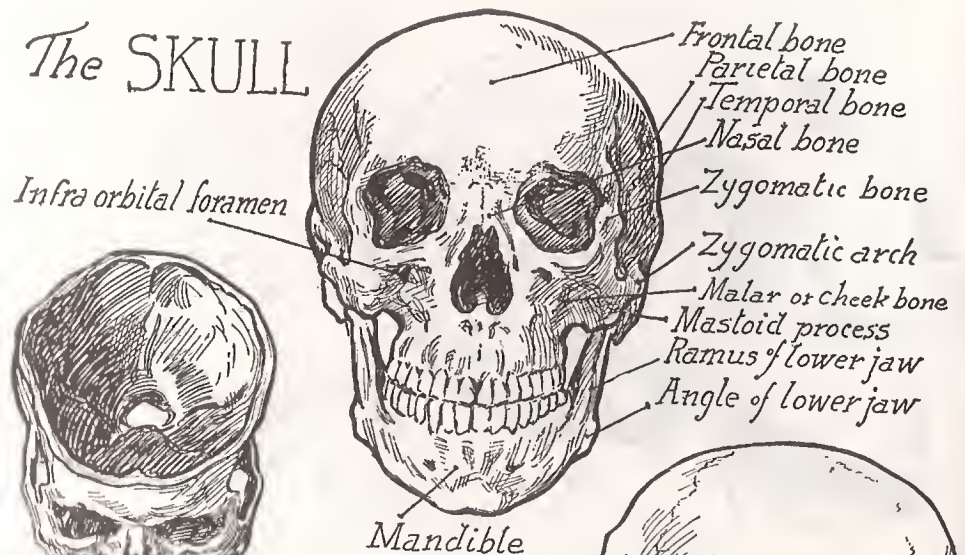


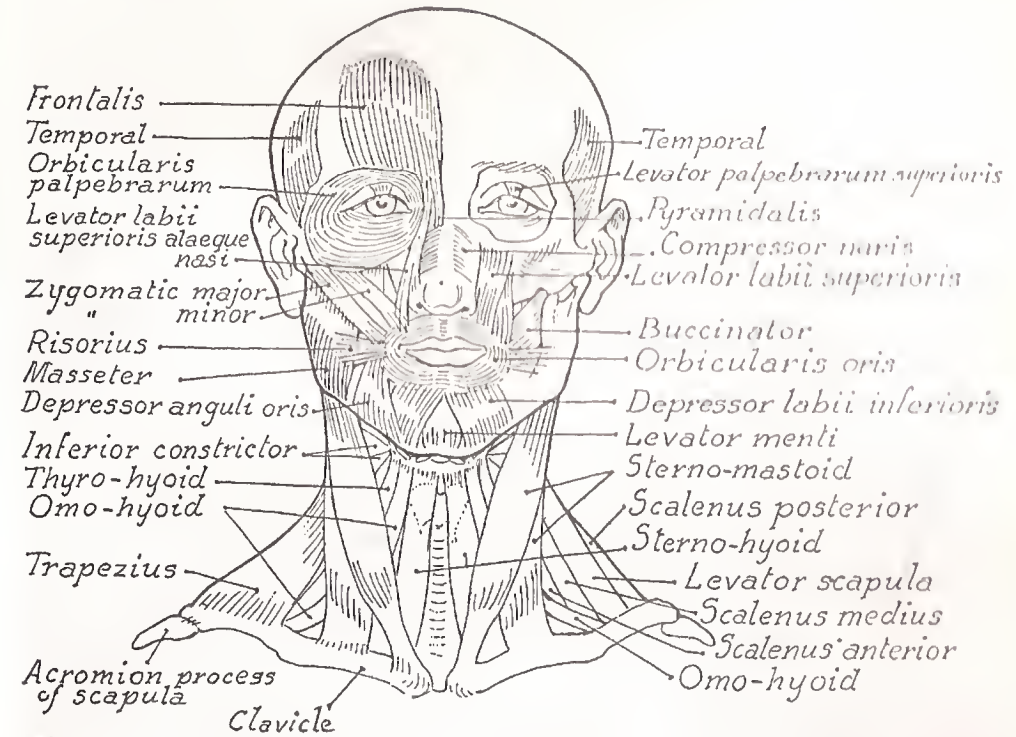
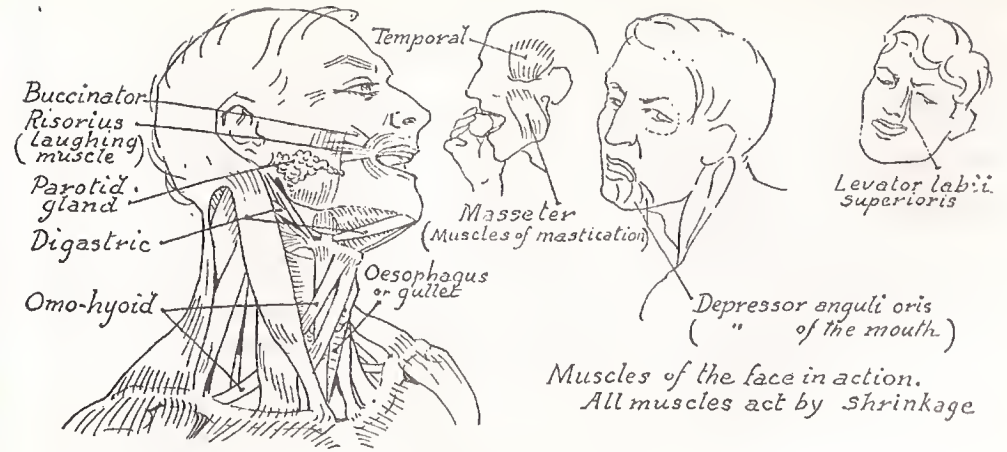
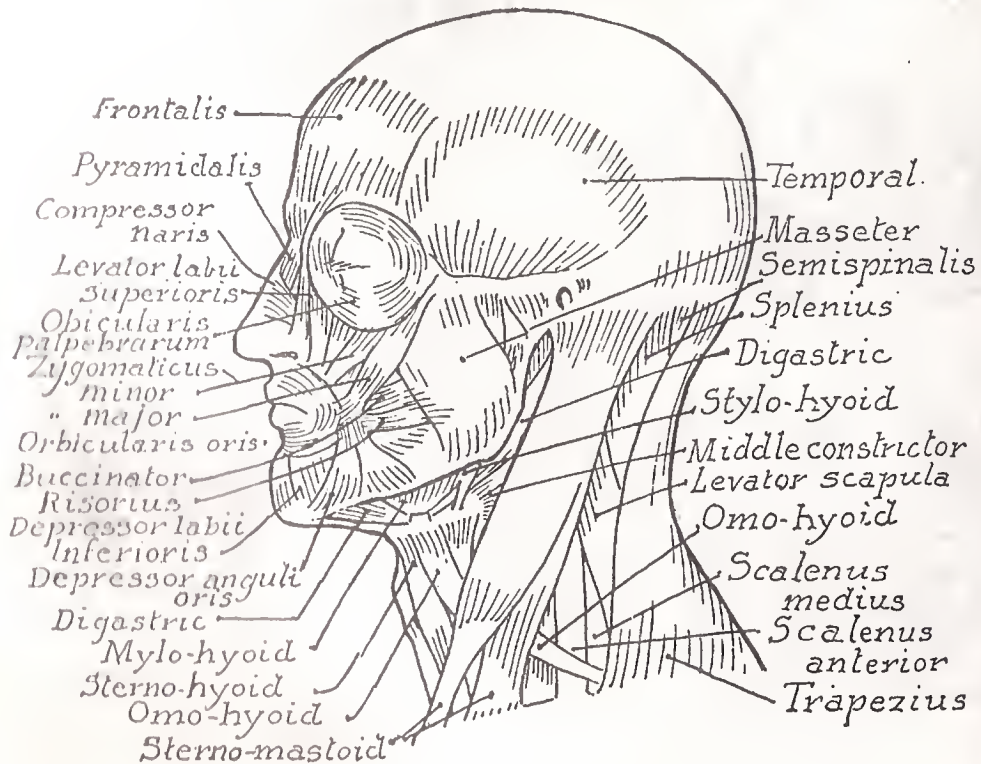
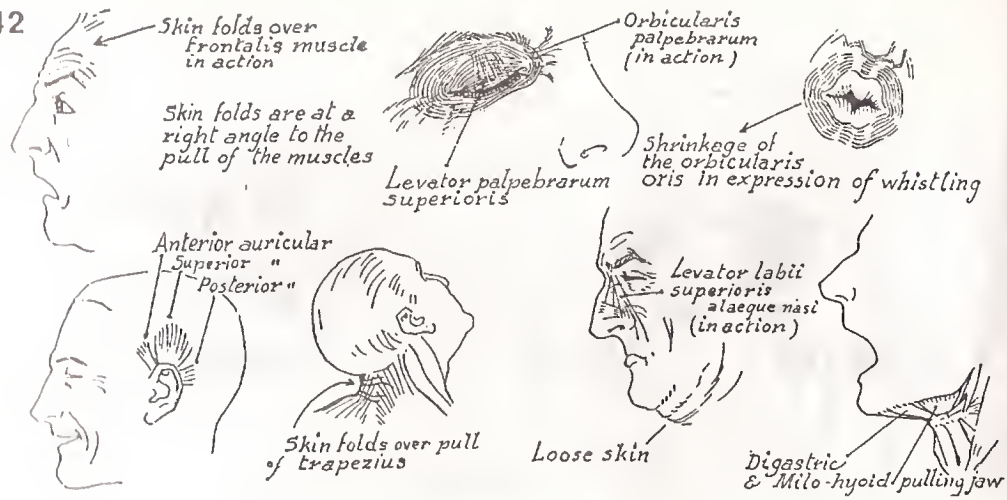


PART III
THE HEAD AND NECK

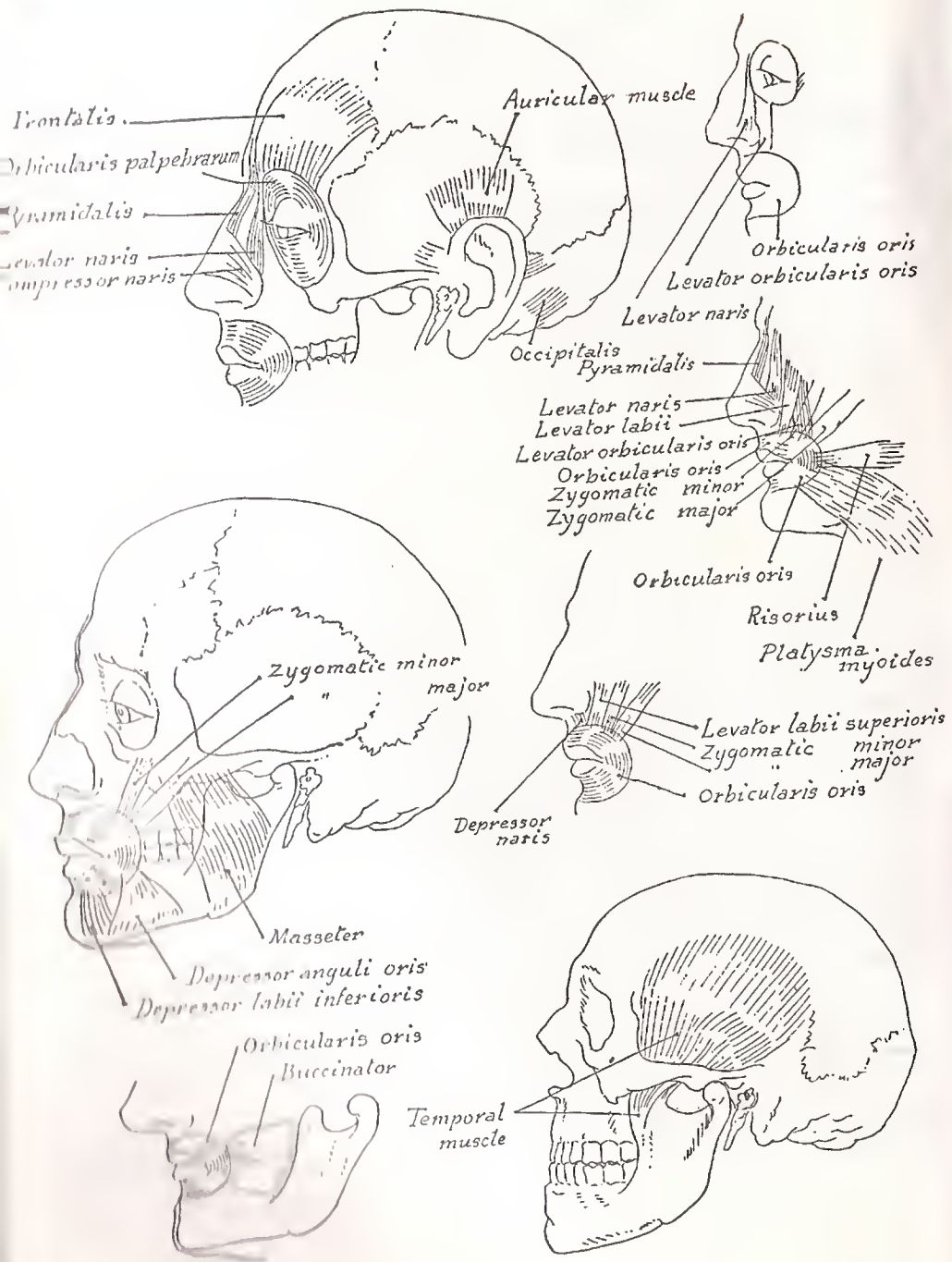


The SKULL

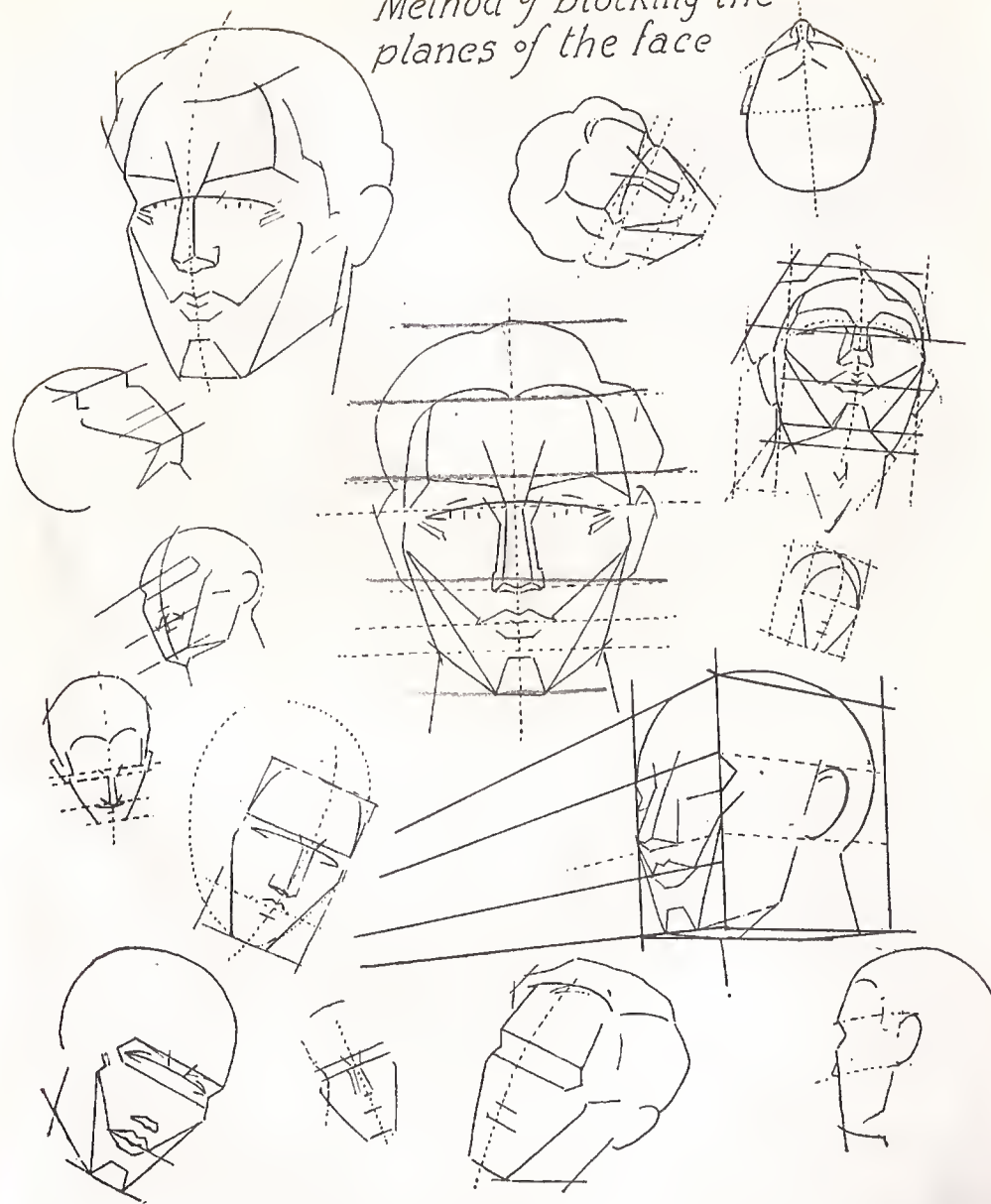




The underlying and the superficial muscles of the face and neck



Method of blocking the planes of the face



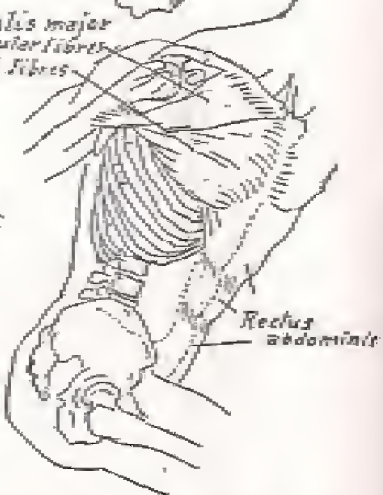
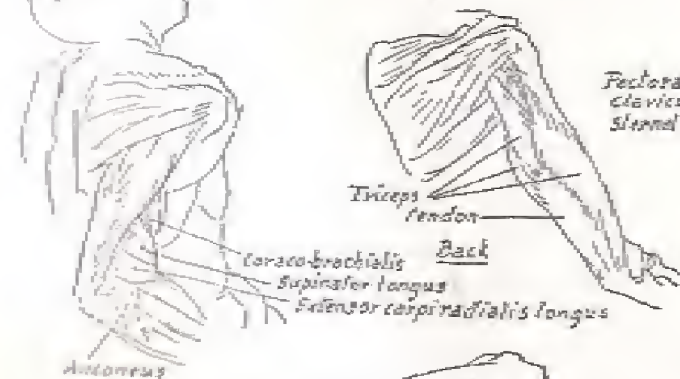
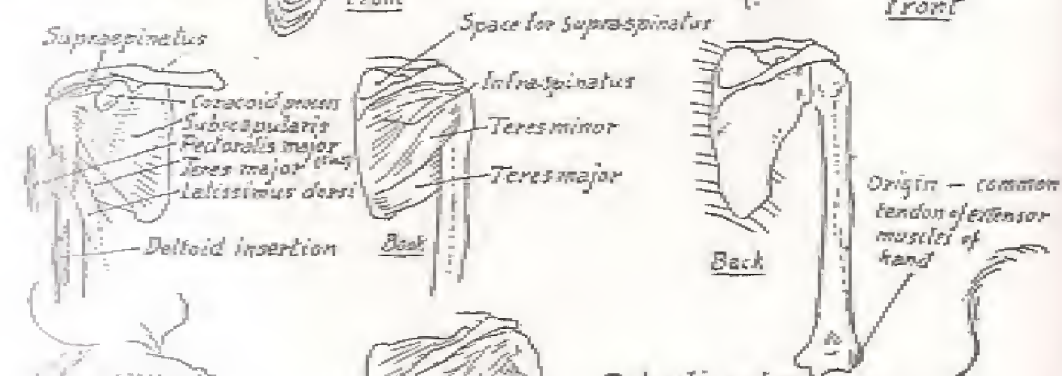
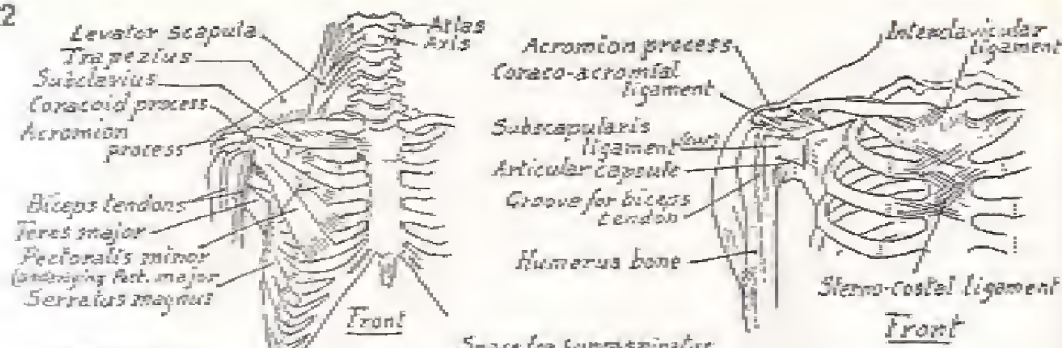


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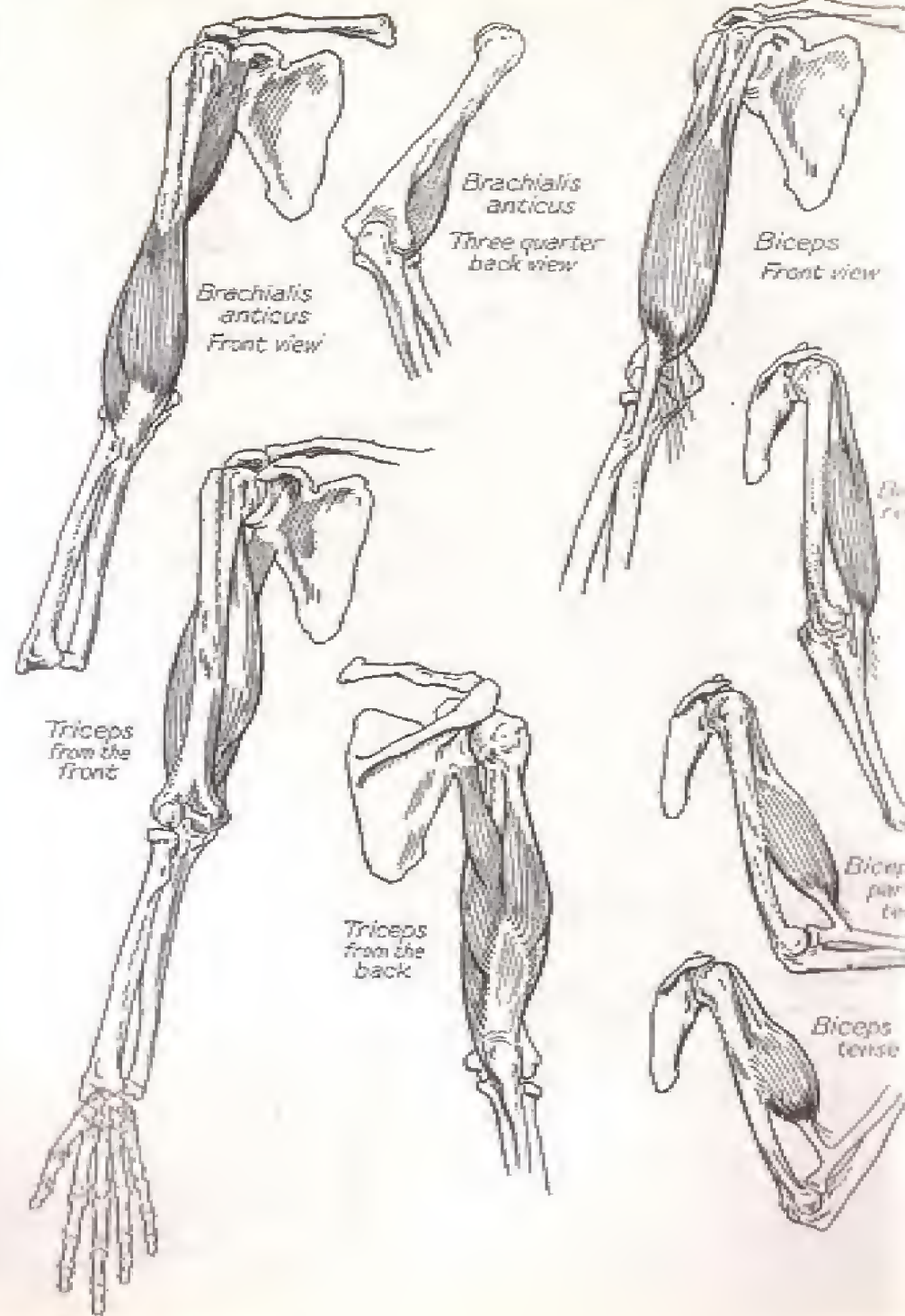


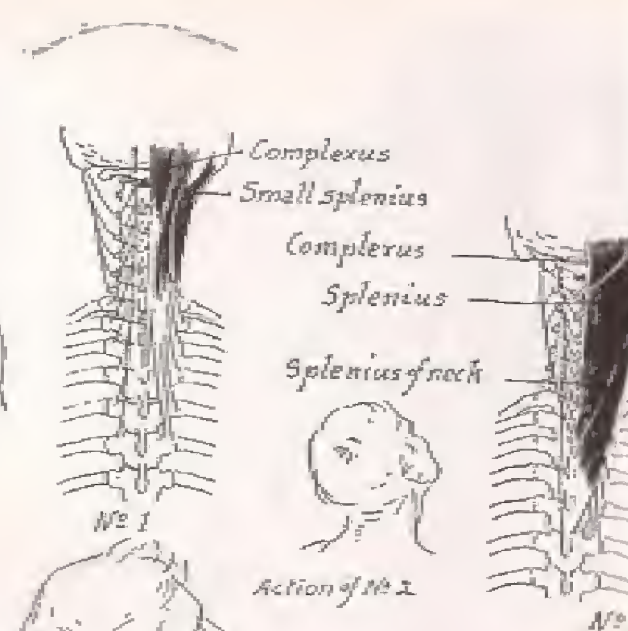
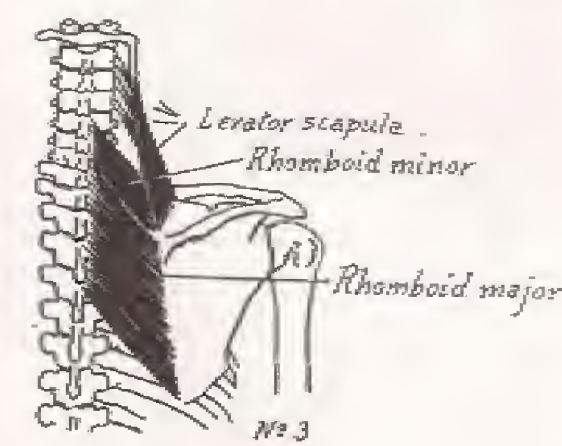
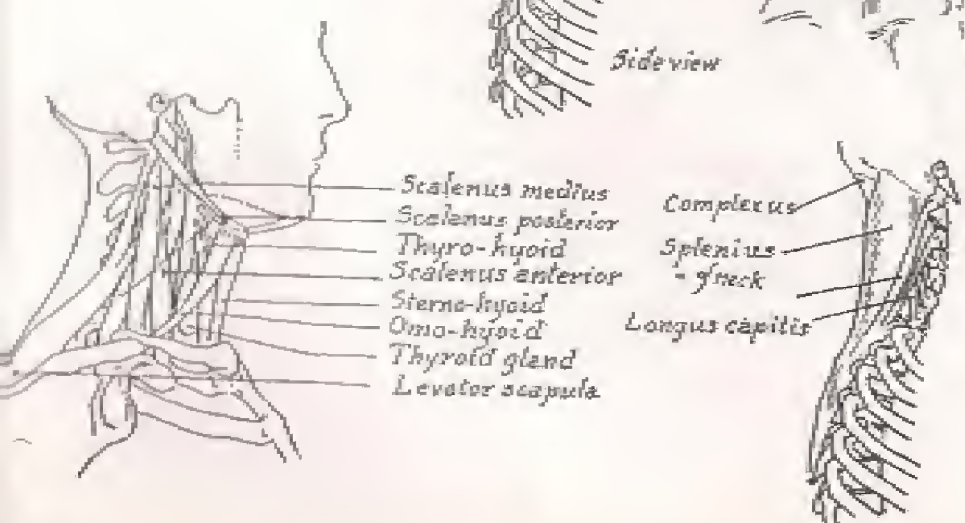
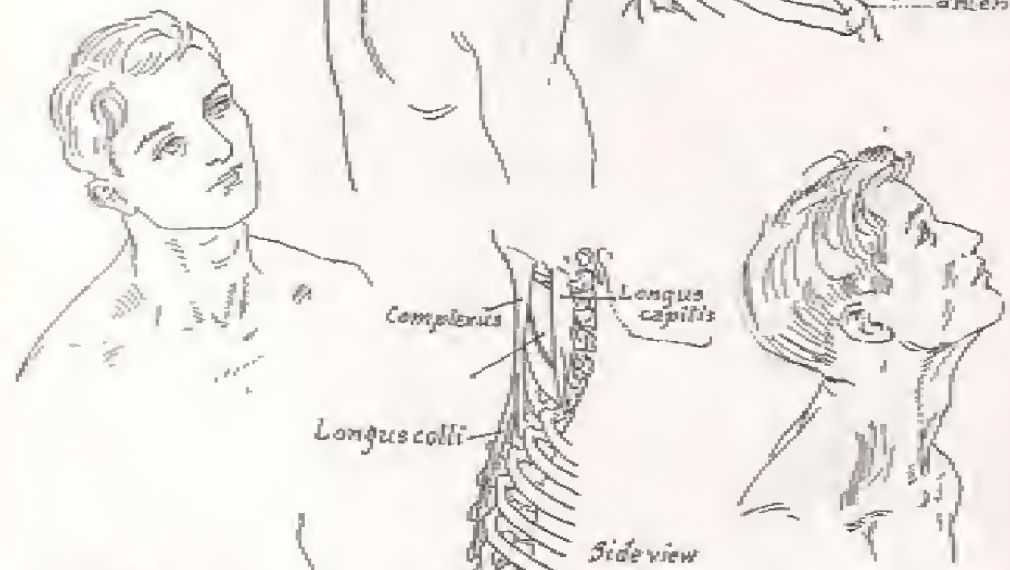
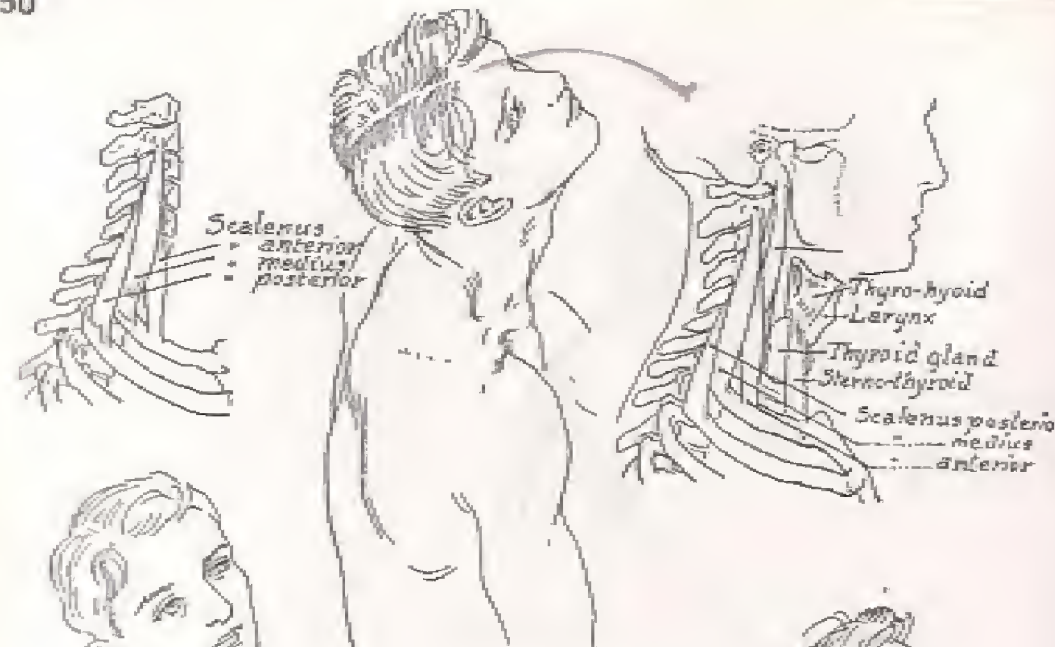
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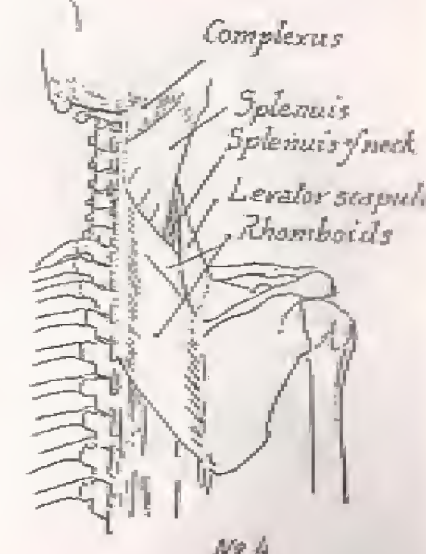


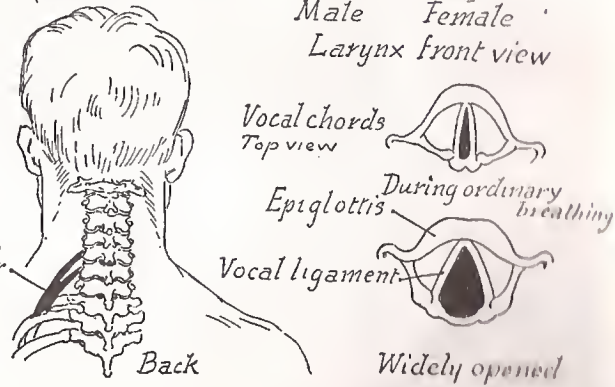
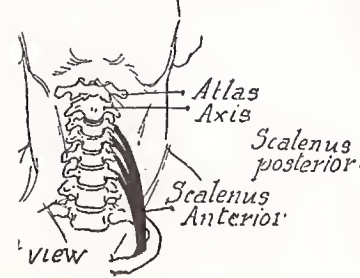
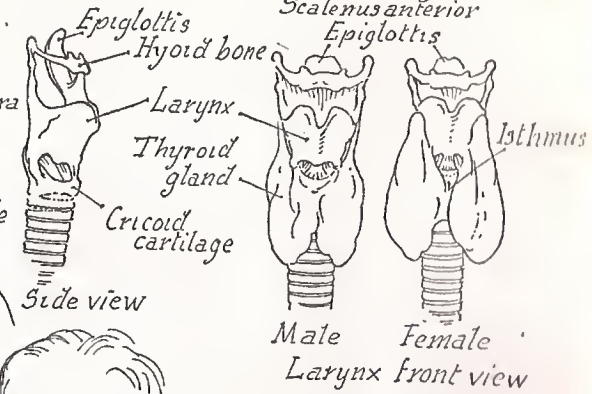
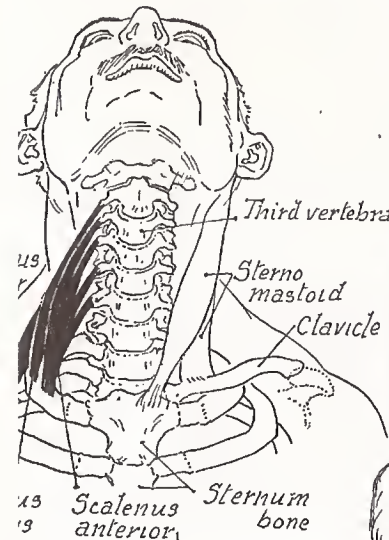
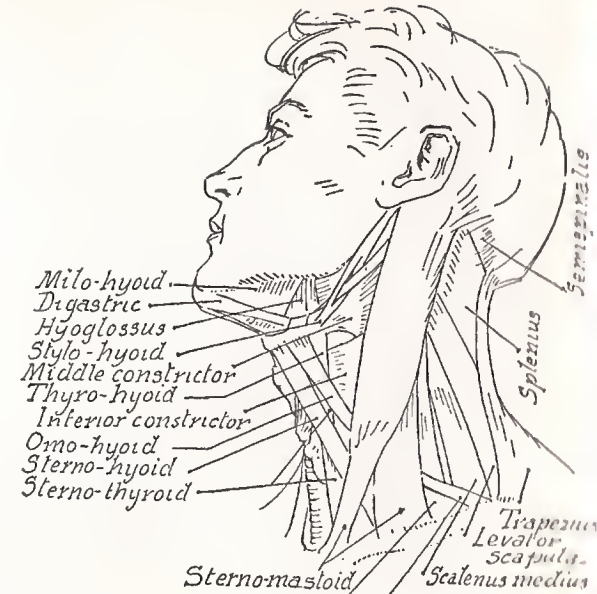
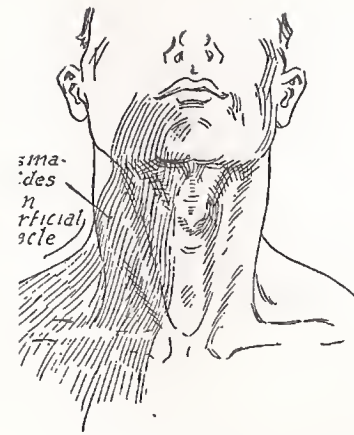
Studies of shoulder girdle, grouped for comparison

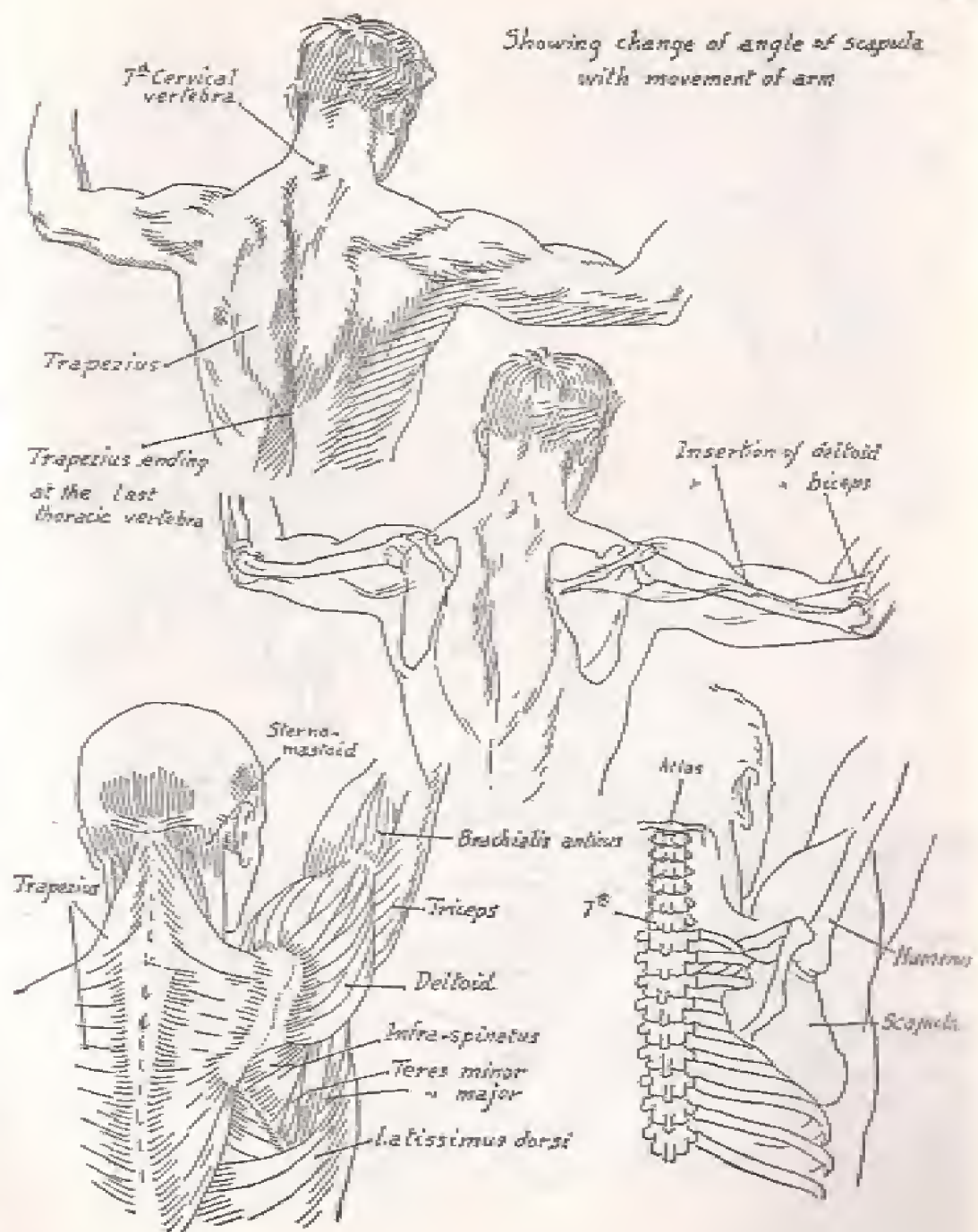
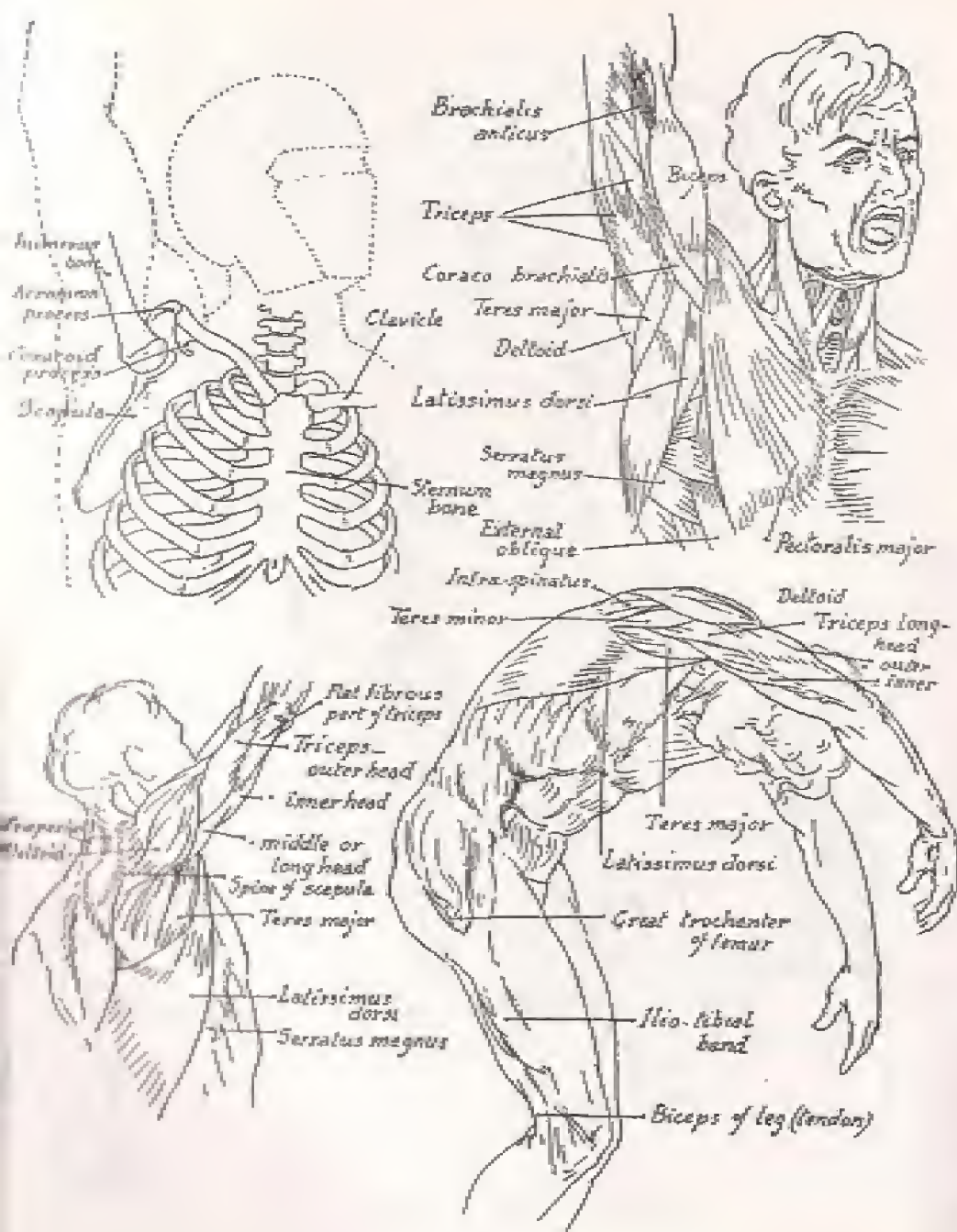


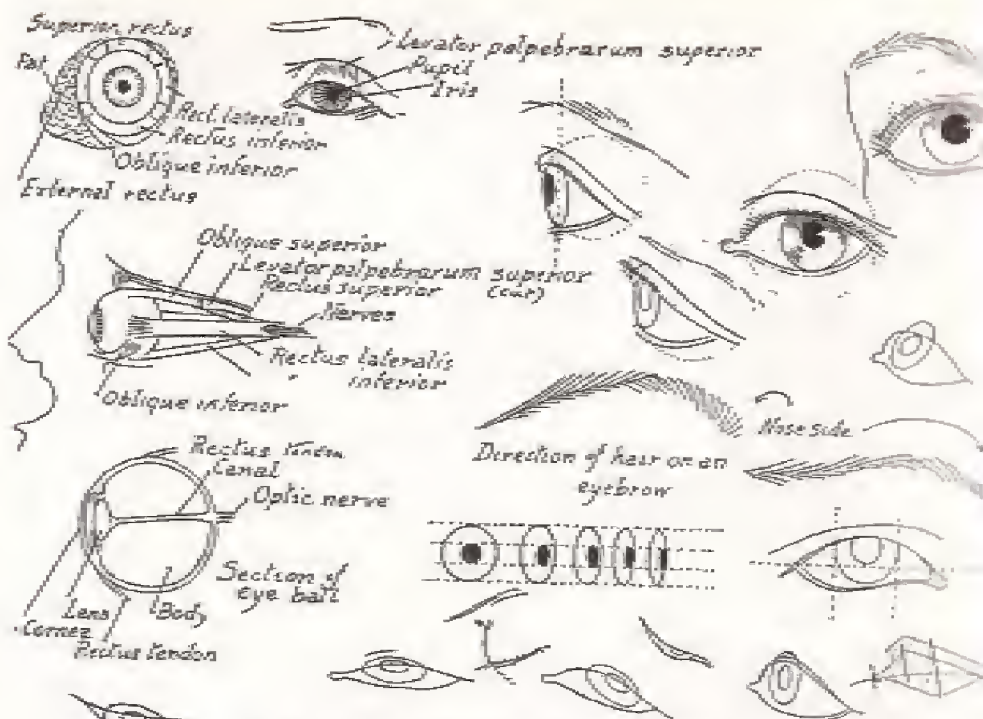
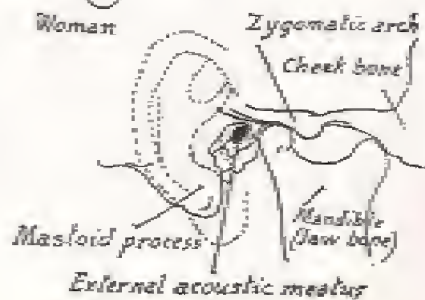
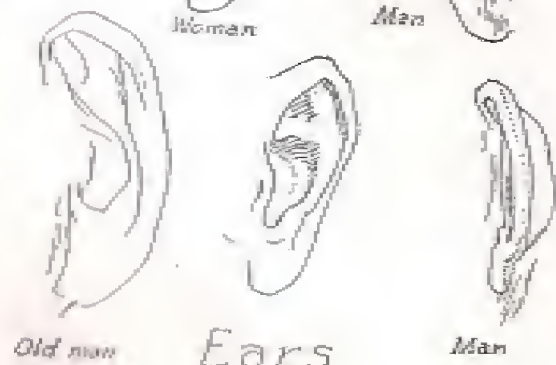
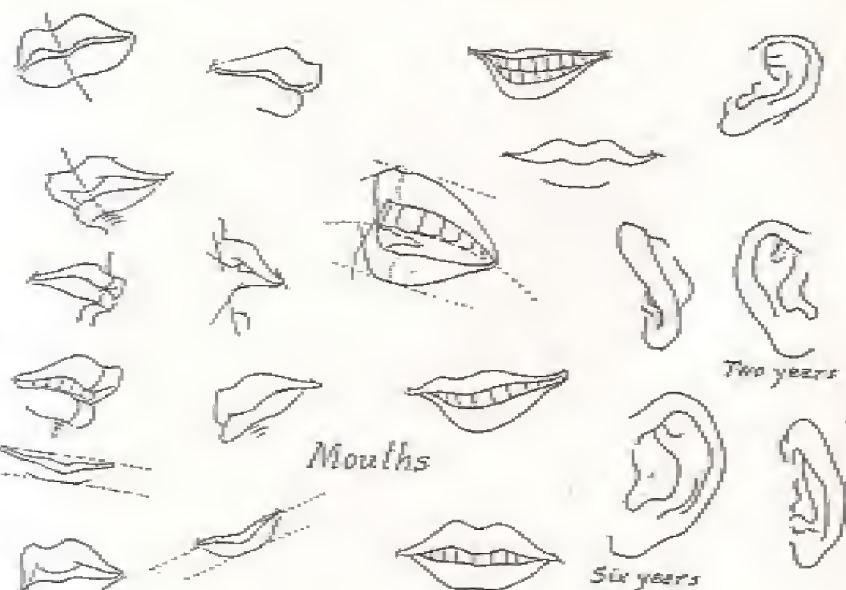


Muscles of back of neck

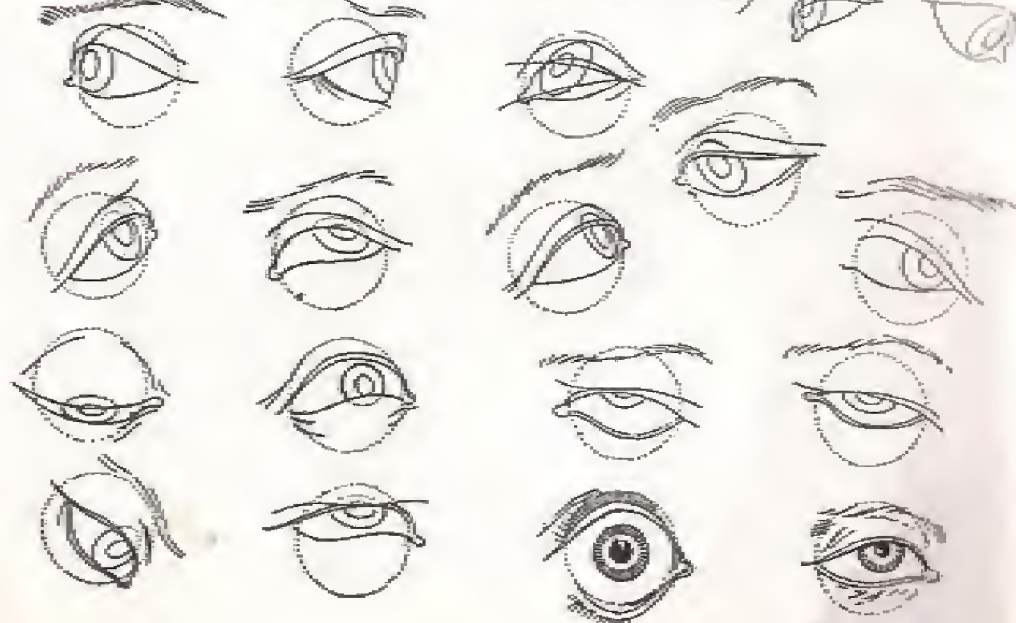


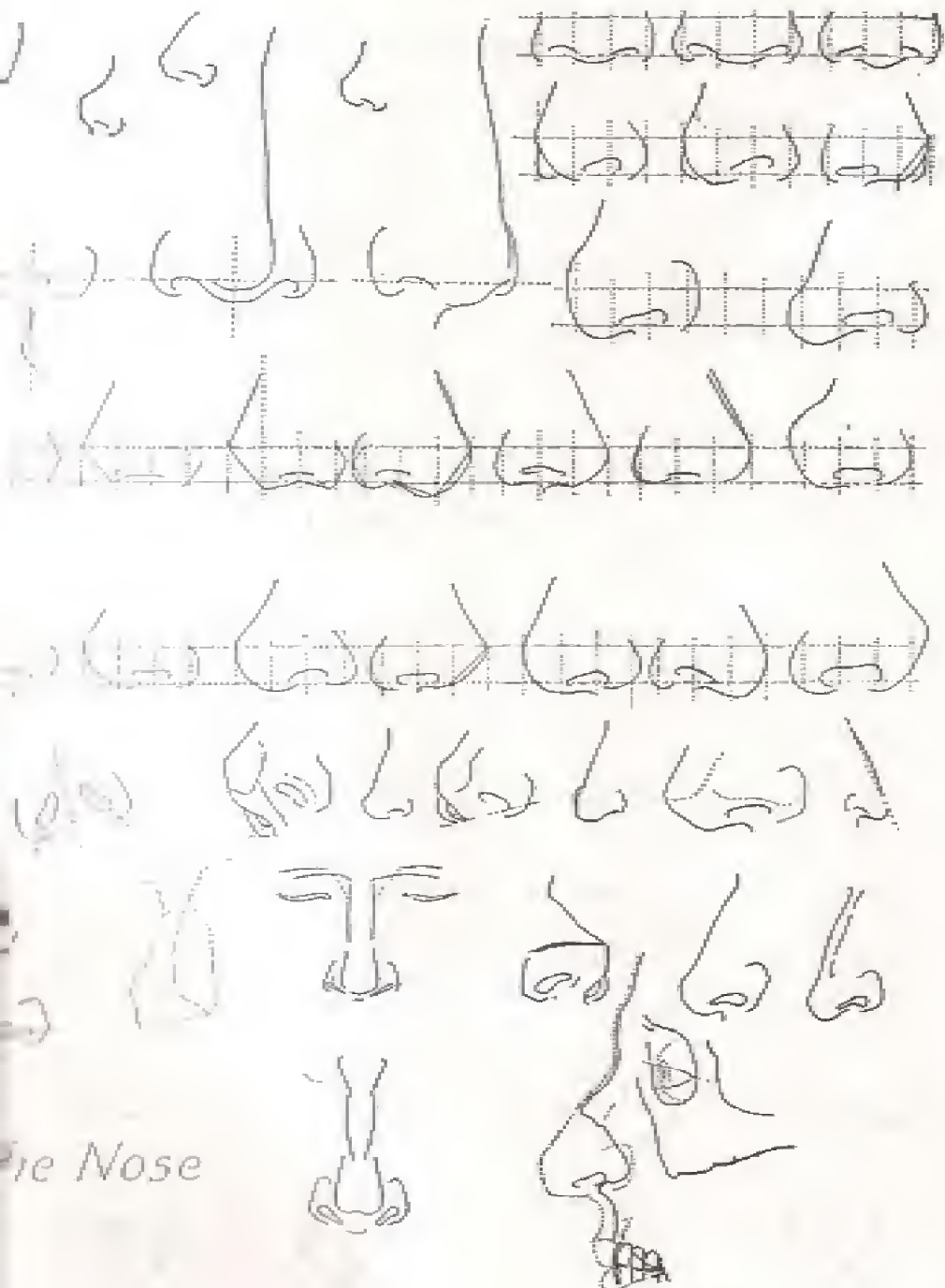






EYES (PRINCIPLES & ACTION)





The Nose



Caucasian
(white race)

Protestant
type

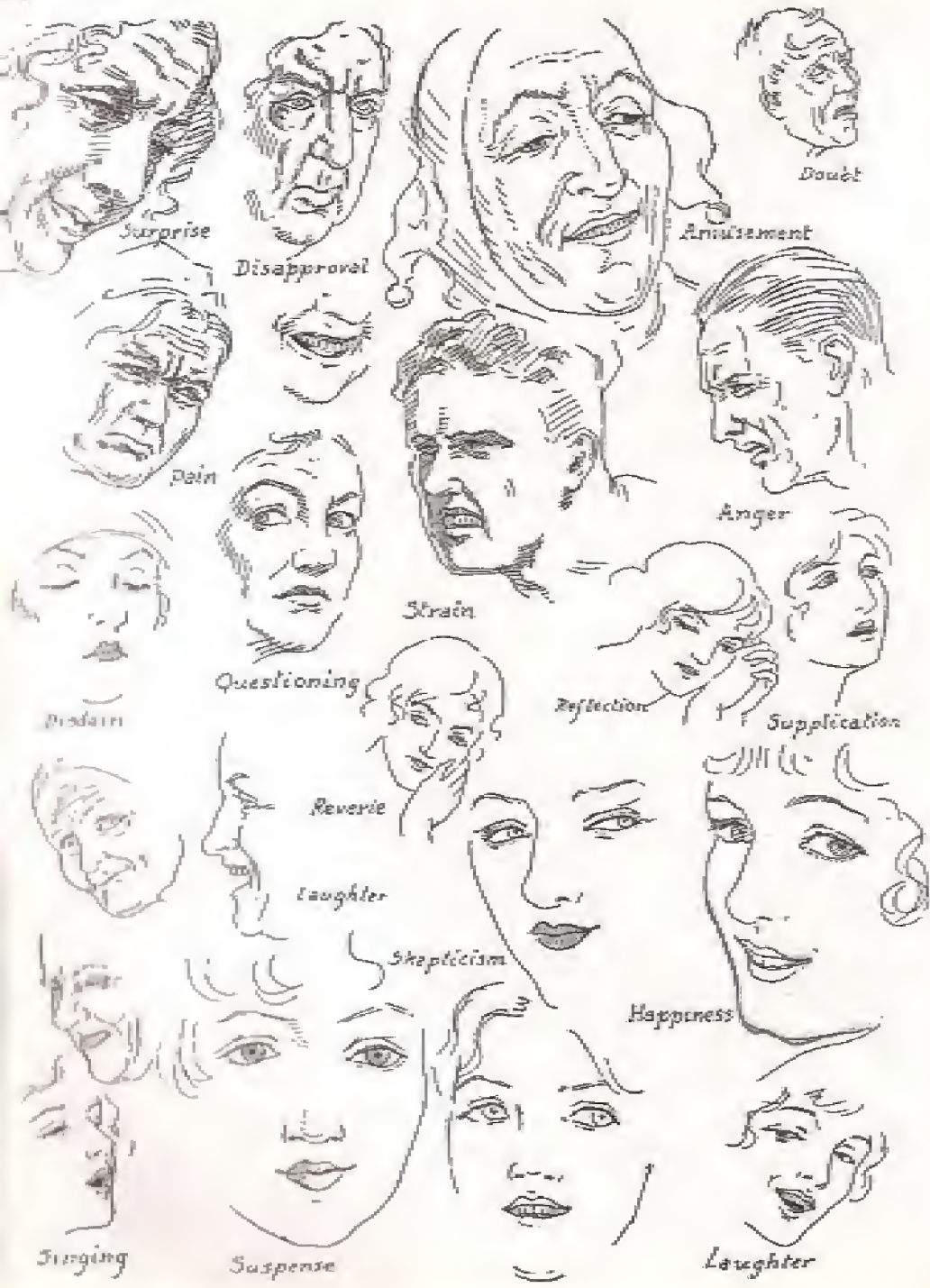
Mongolian
(yellow race)

Ethiopian
(black race)

American Indian
(red race)

Malayan
(brown race)

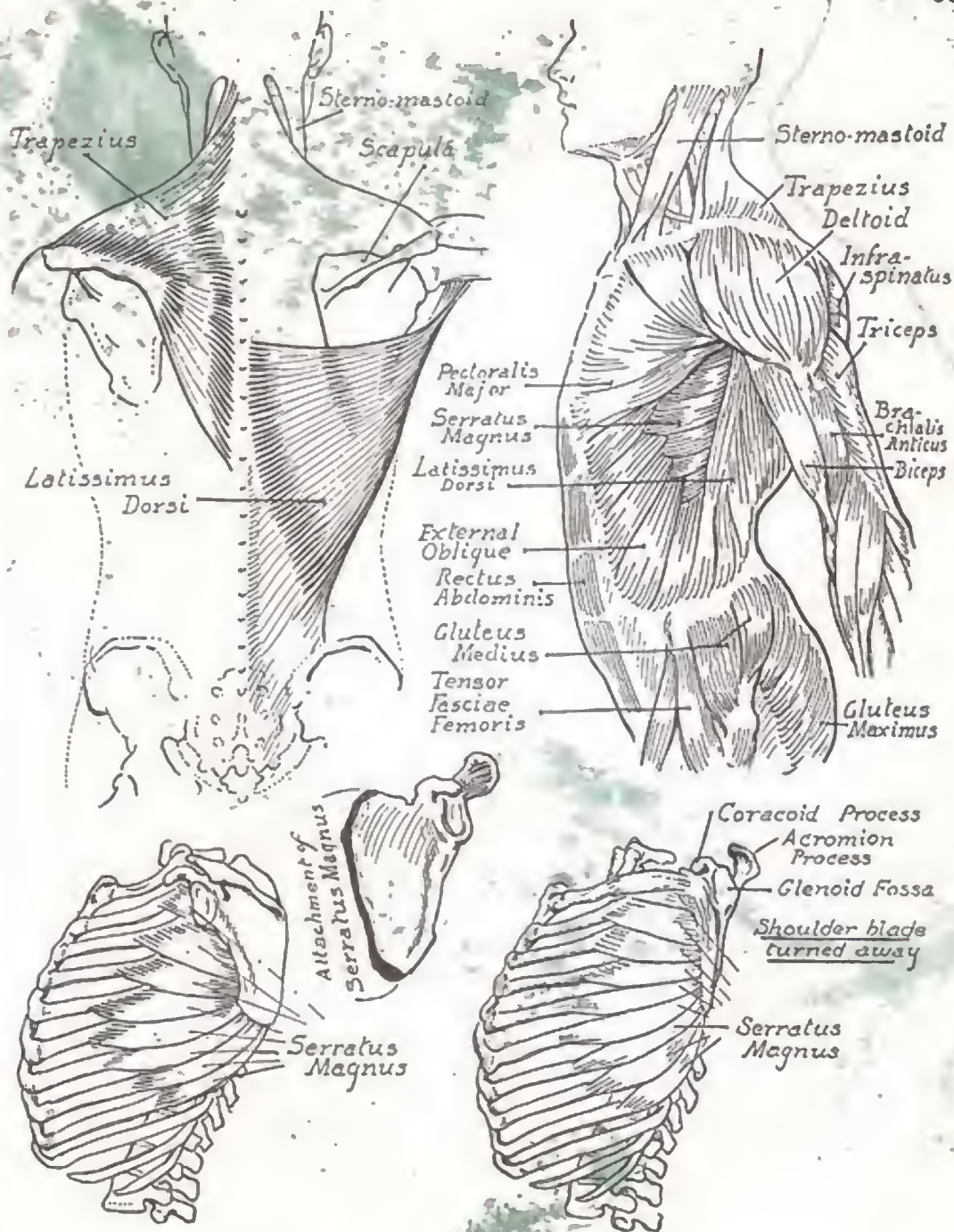
The five races of man

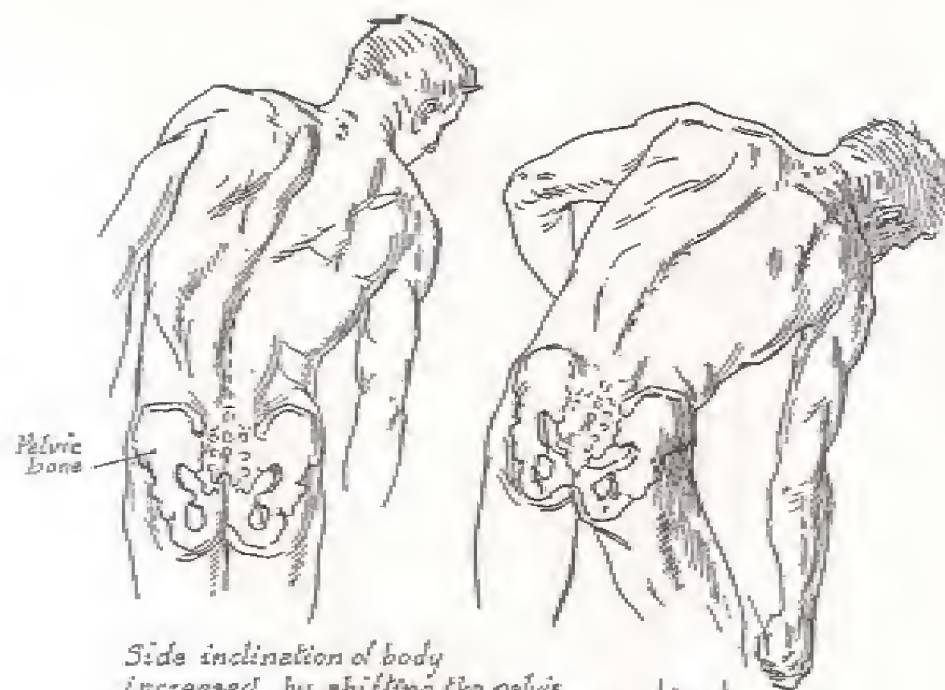


Studies of Expression



PART IV
THE TORSO





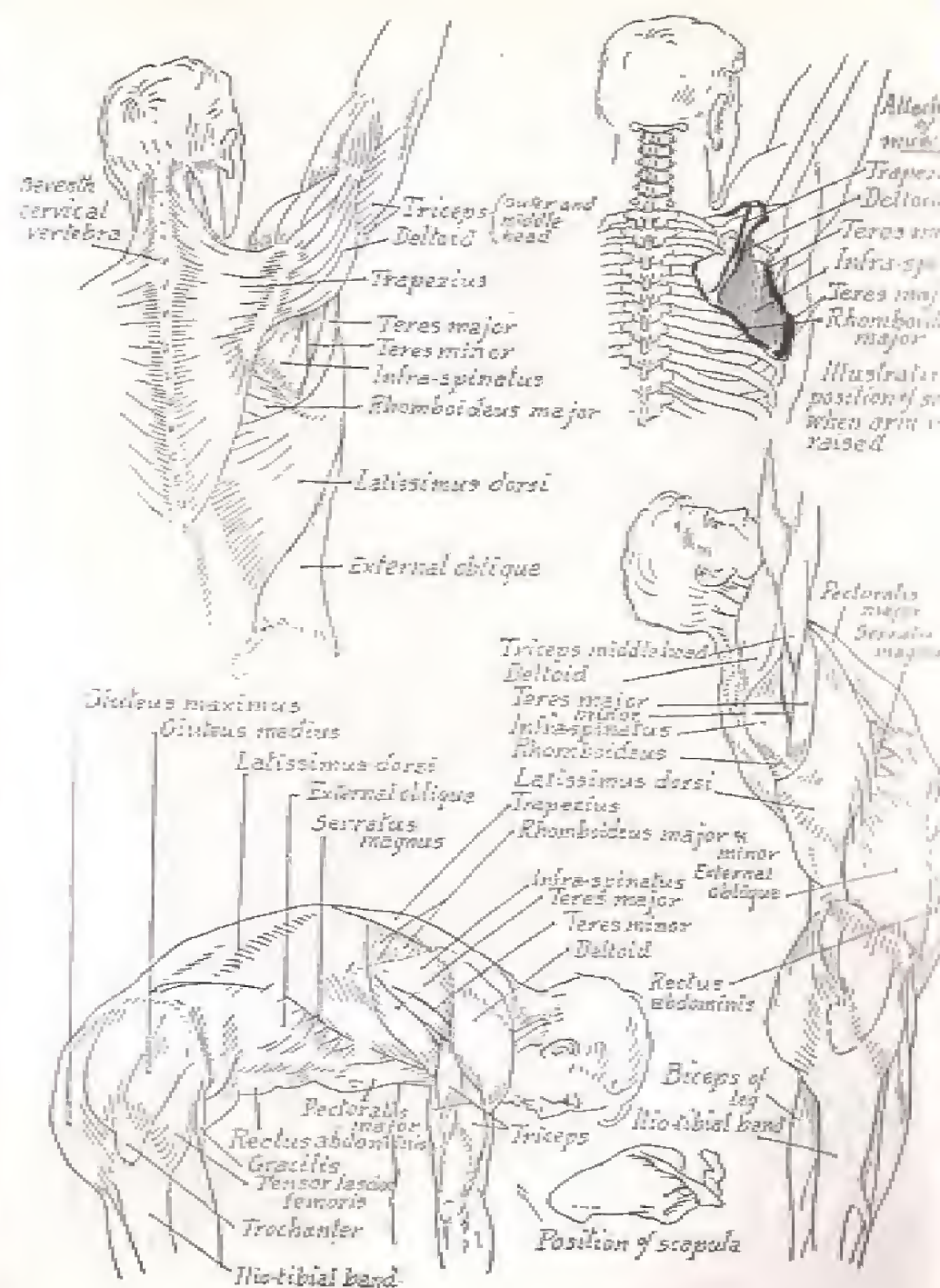
Side inclination of body increased by shifting the pelvis from horizontal to oblique position

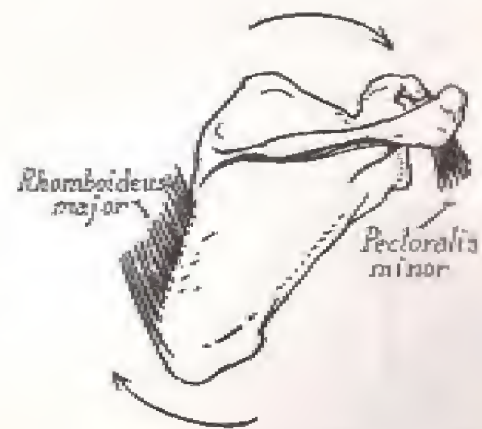
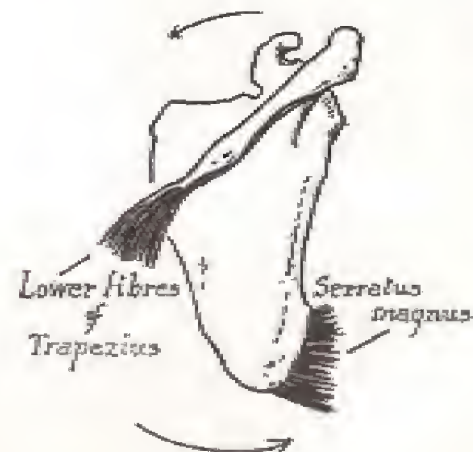
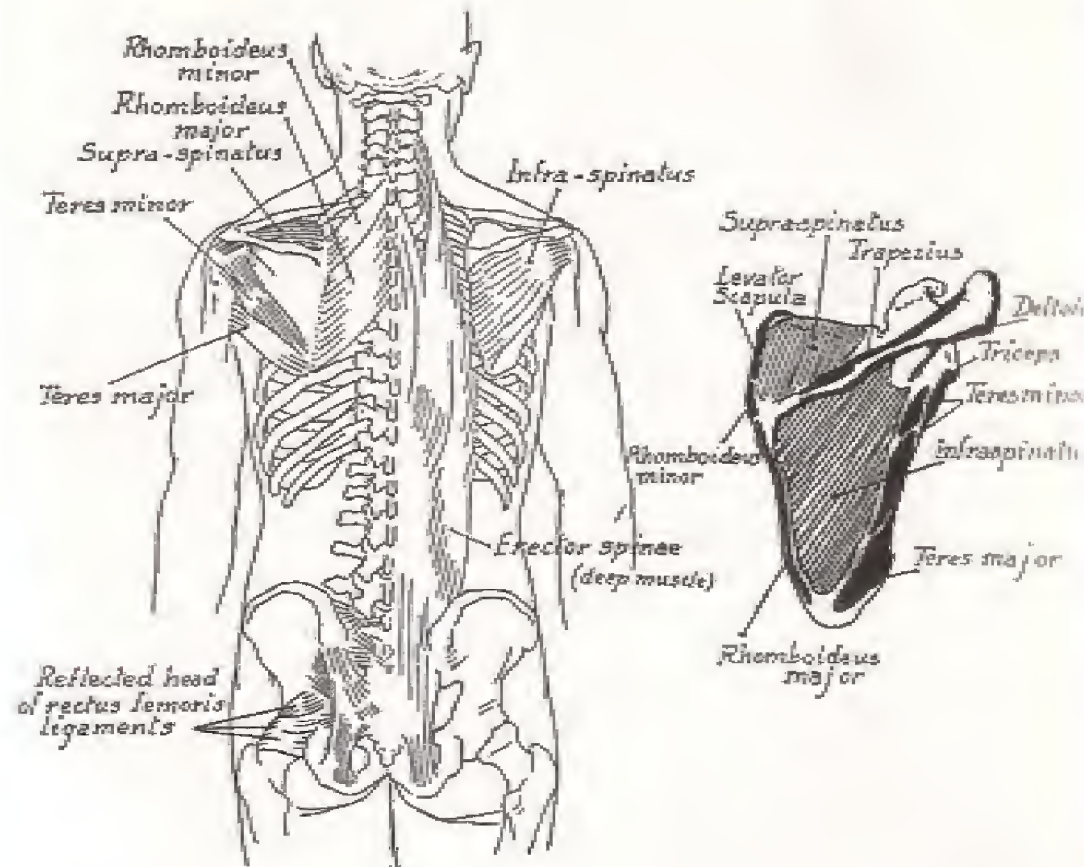
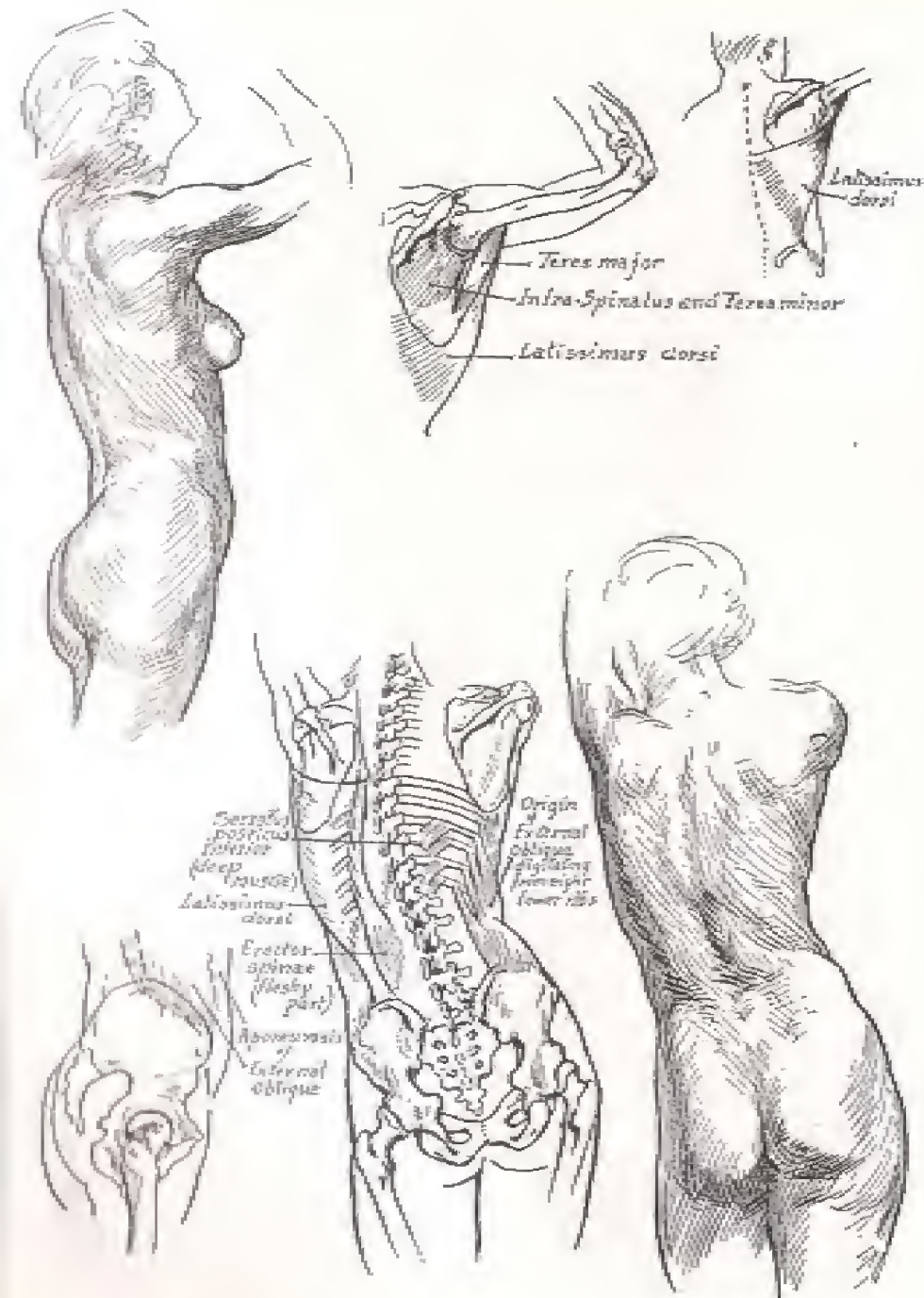
Group of erector spinae muscles stretched, permitting spine to show

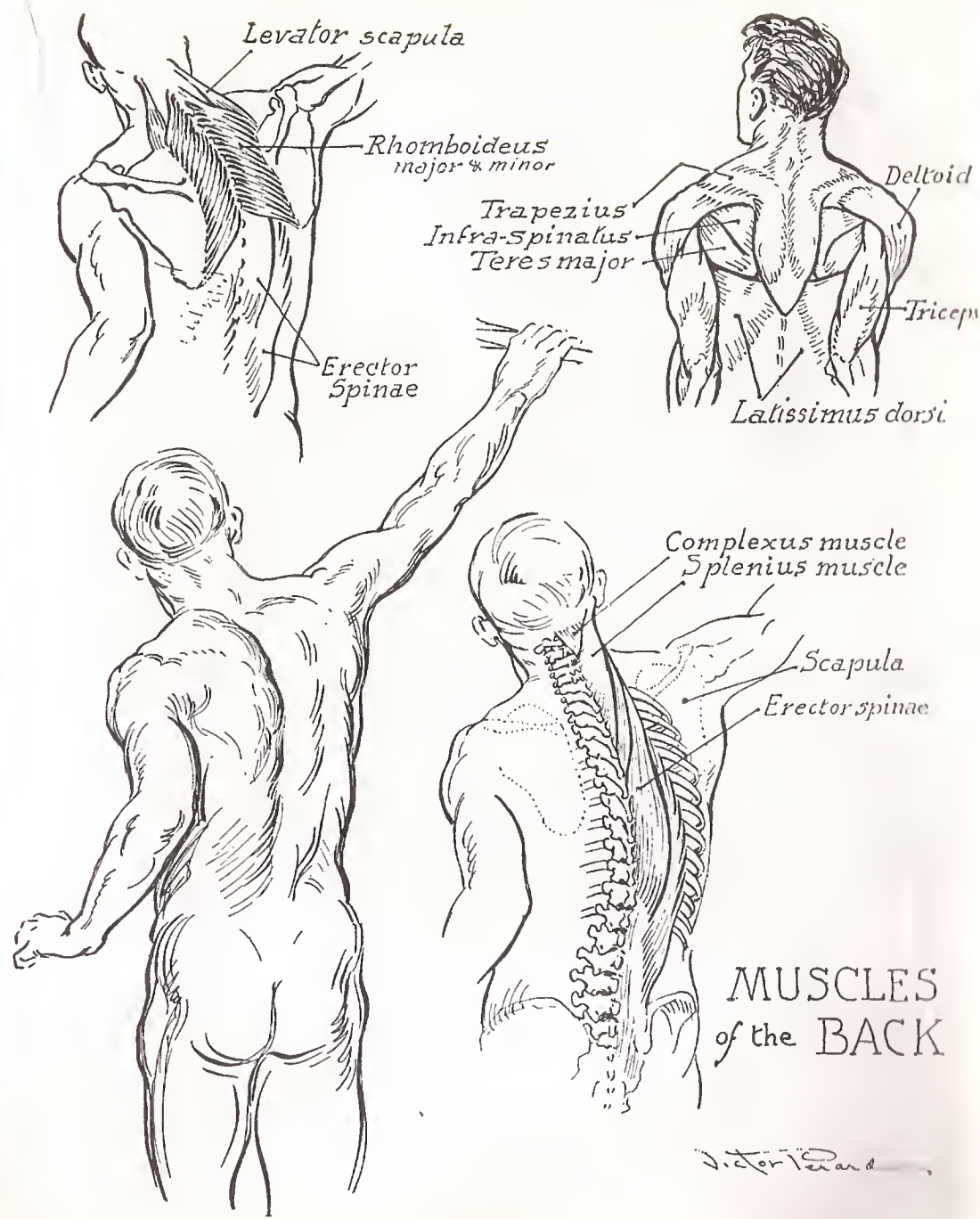
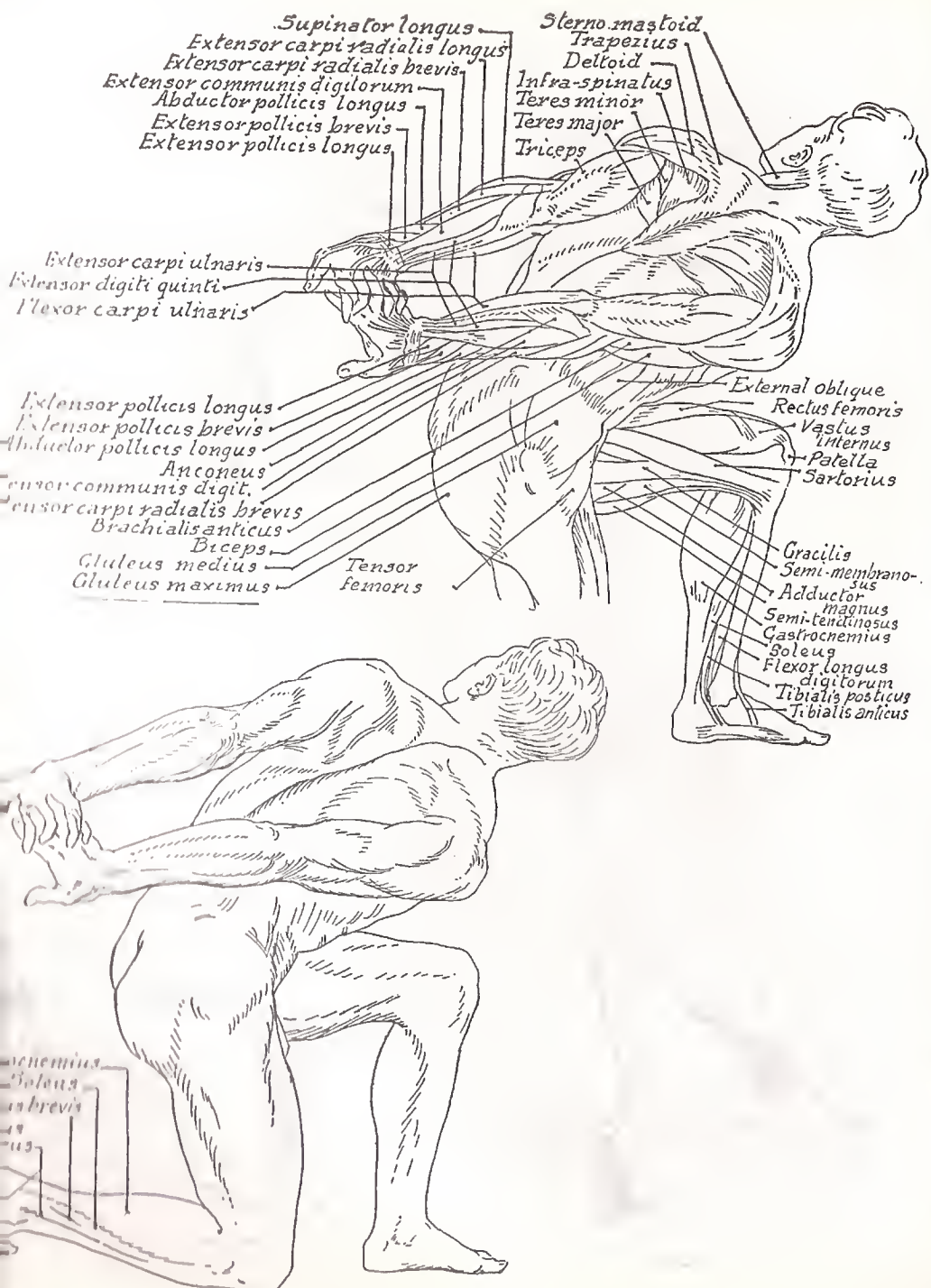
Trapezius
Infra-spinatus

Ilio-femoral ligament prevents excessive extension backward

Triceps
Deltoid

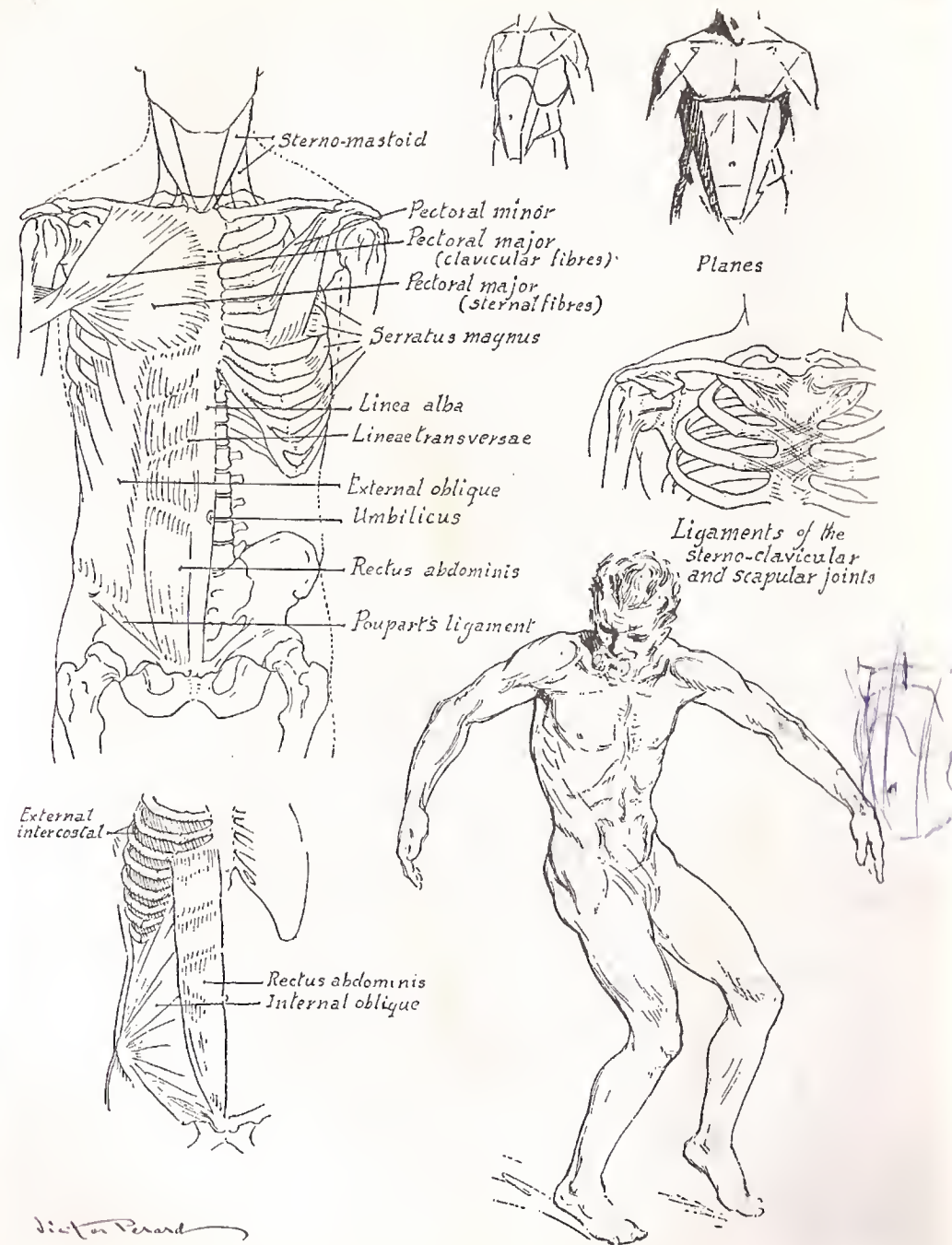
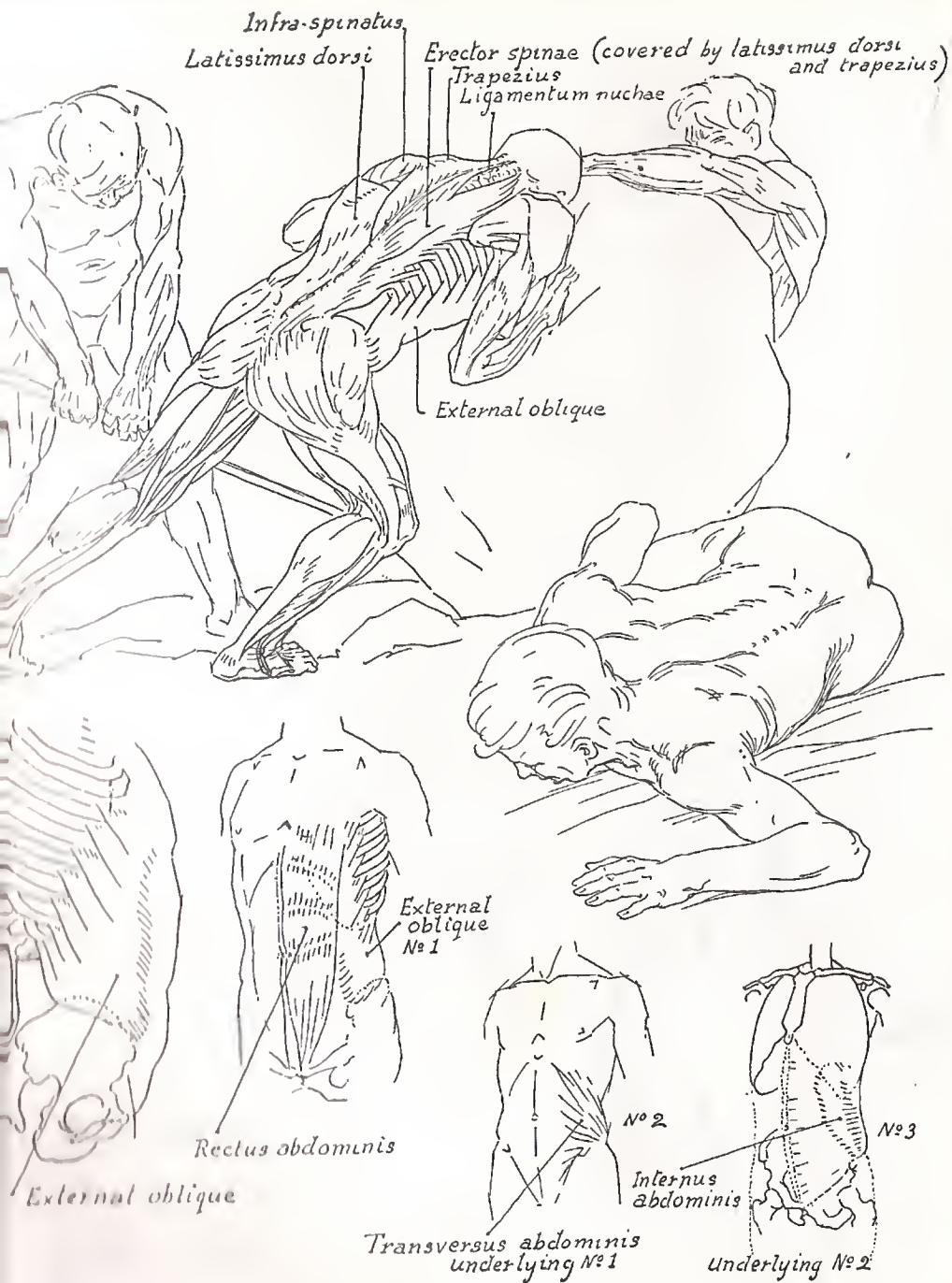






MUSCLES of the BACK

Victor Rand



terior superior
liac spine
portion of
nominatum
tion of
nominatum
bulum
for head of femur

bis

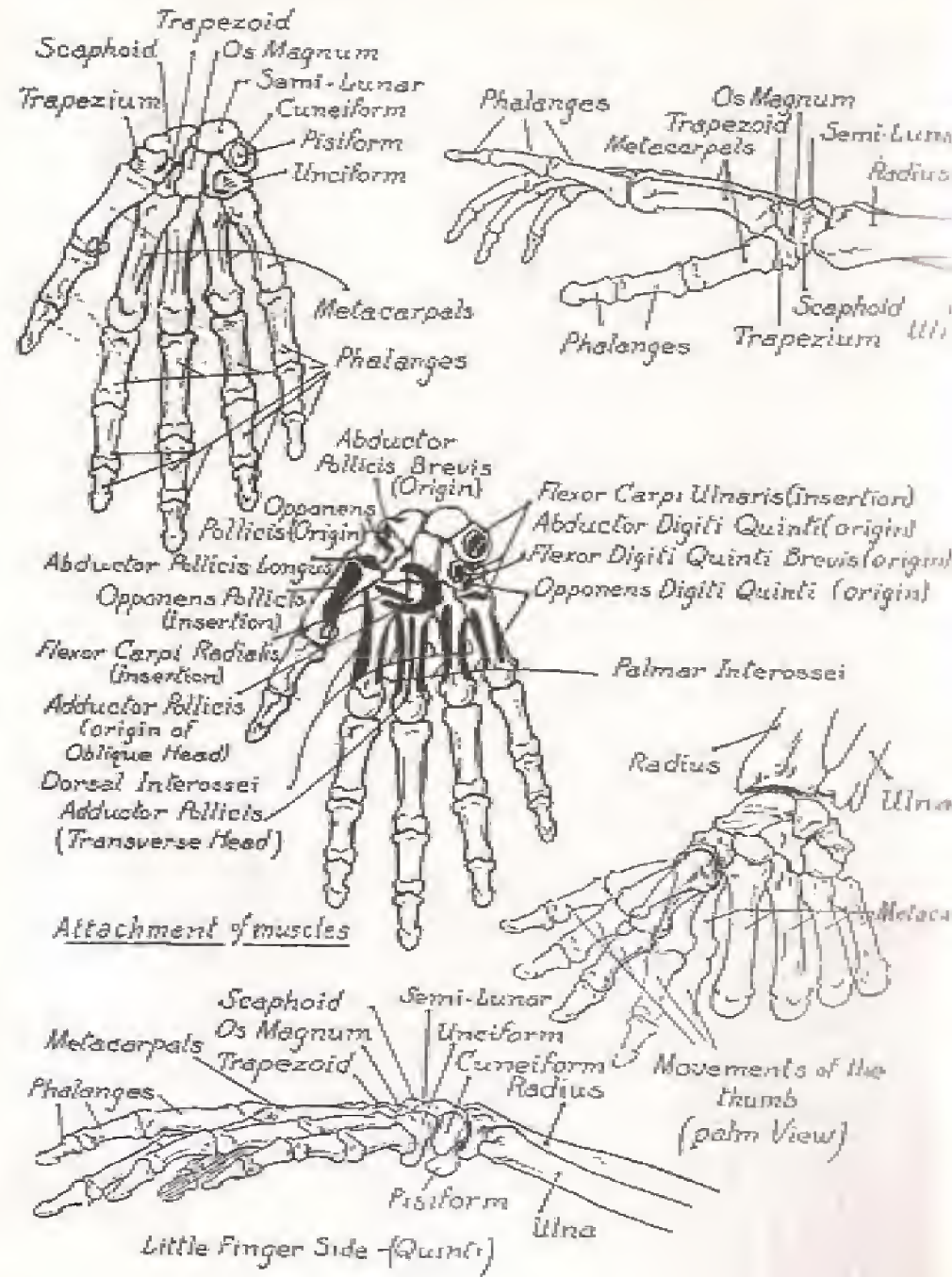
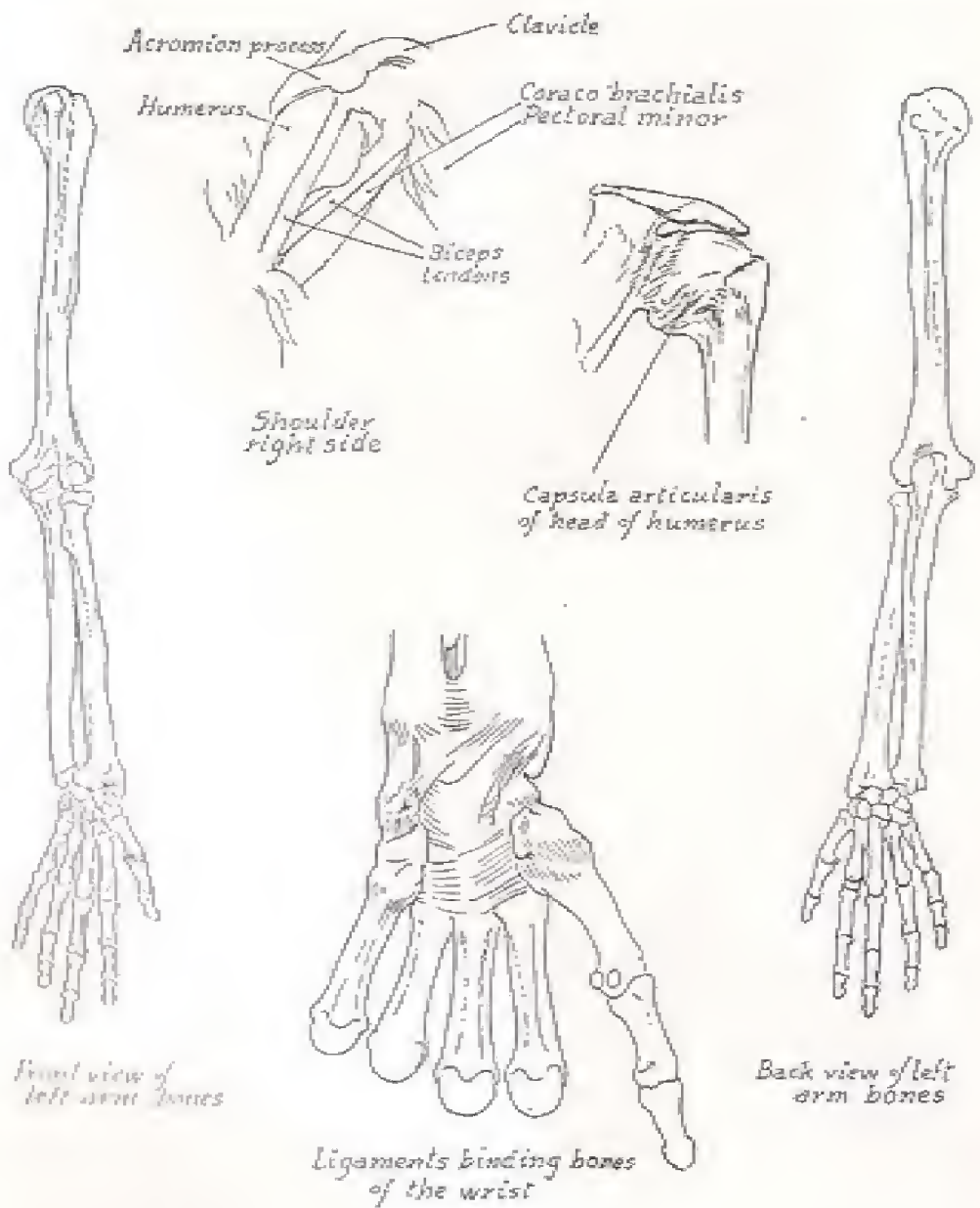
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iac spine
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of ischium

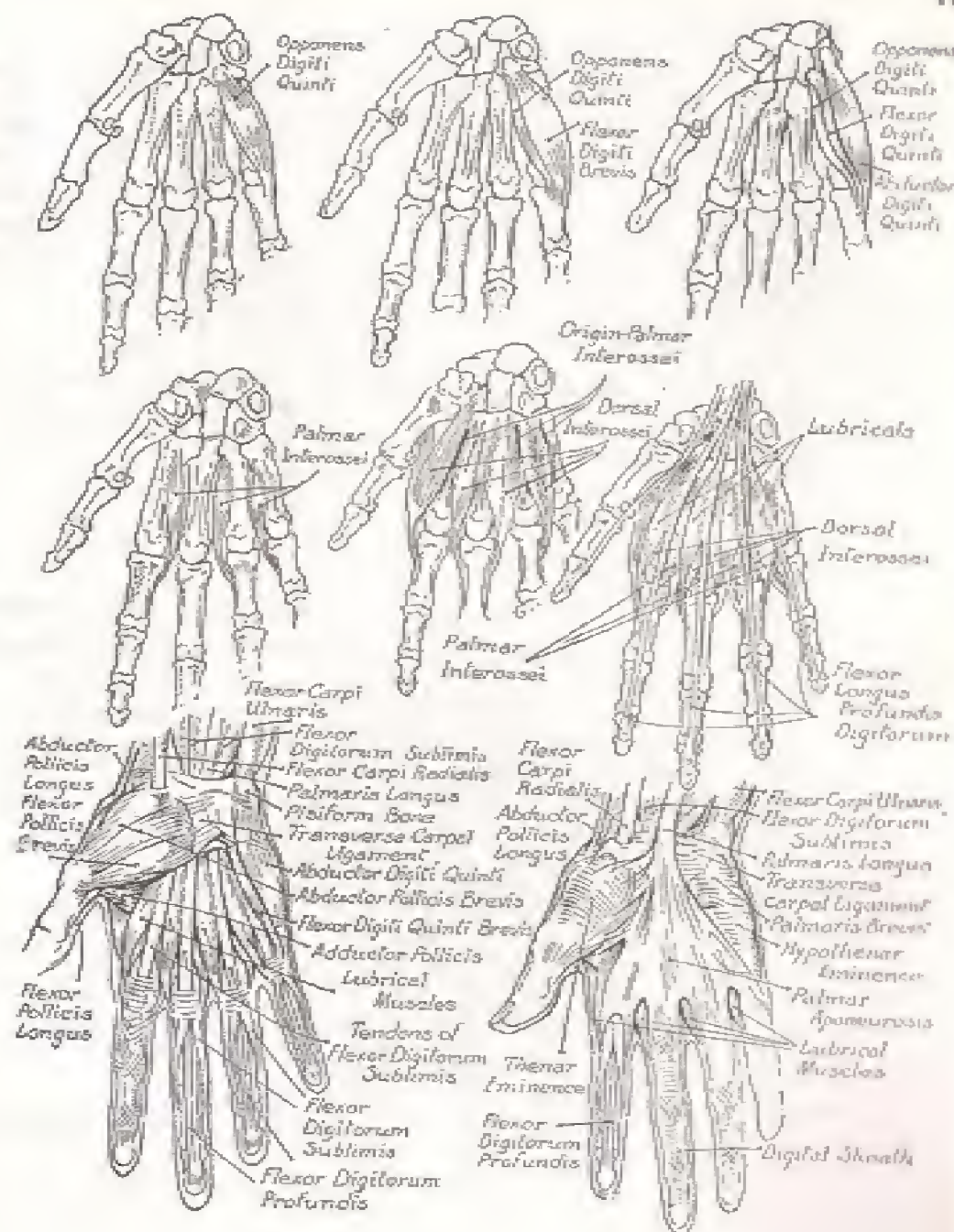
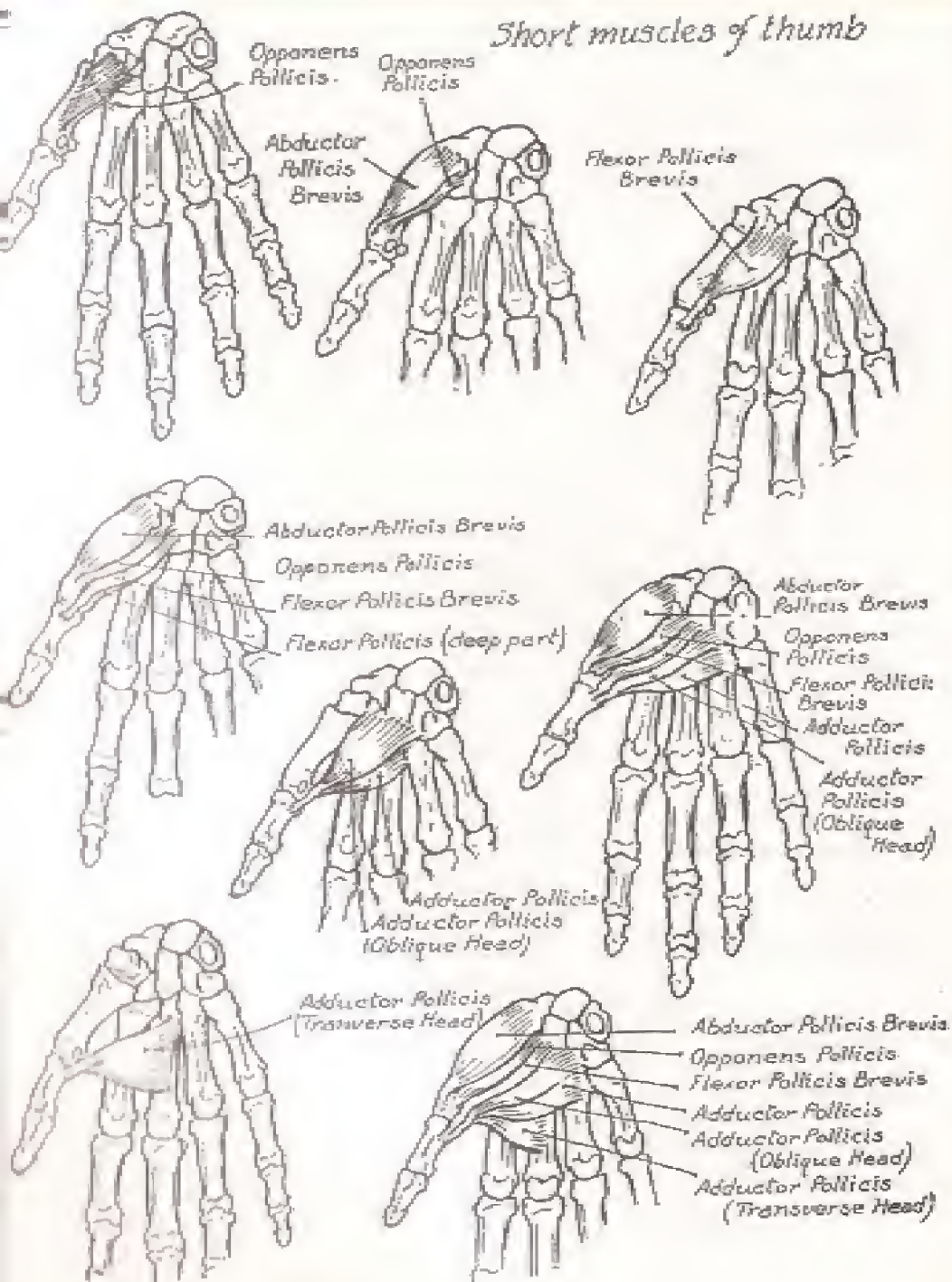
Male

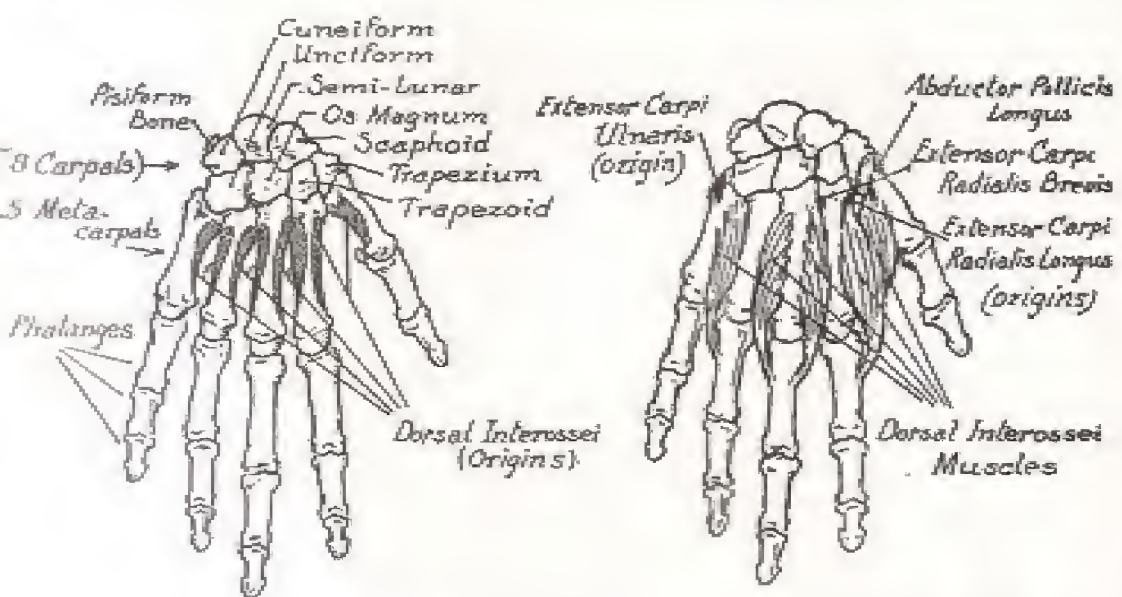


at and breadth

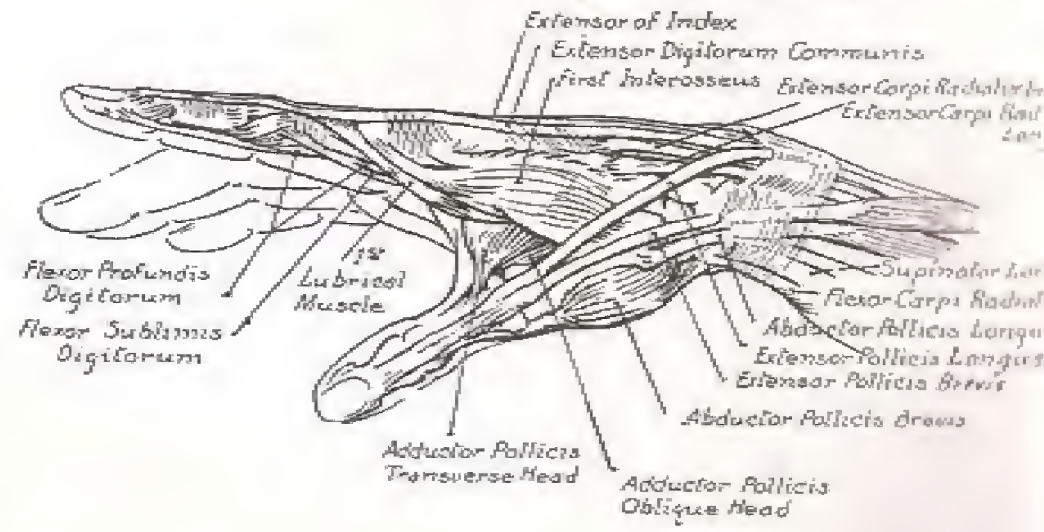
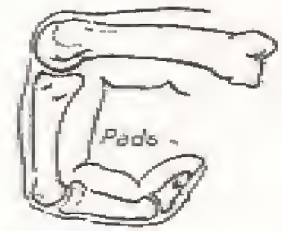
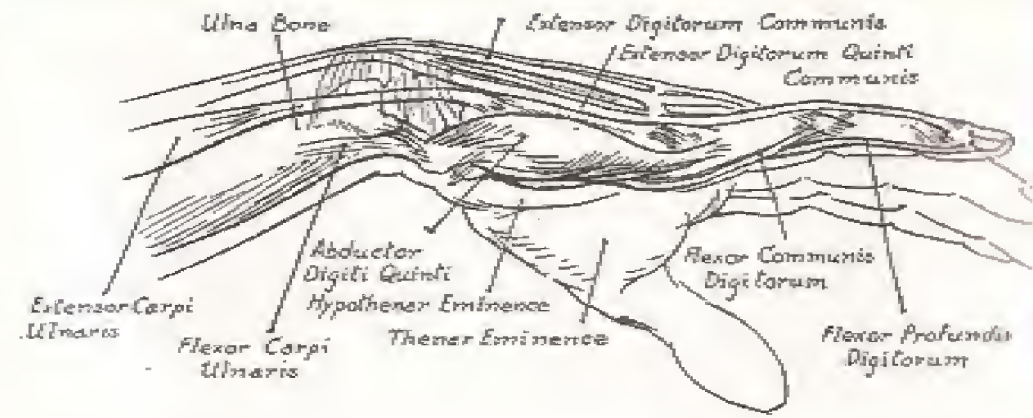
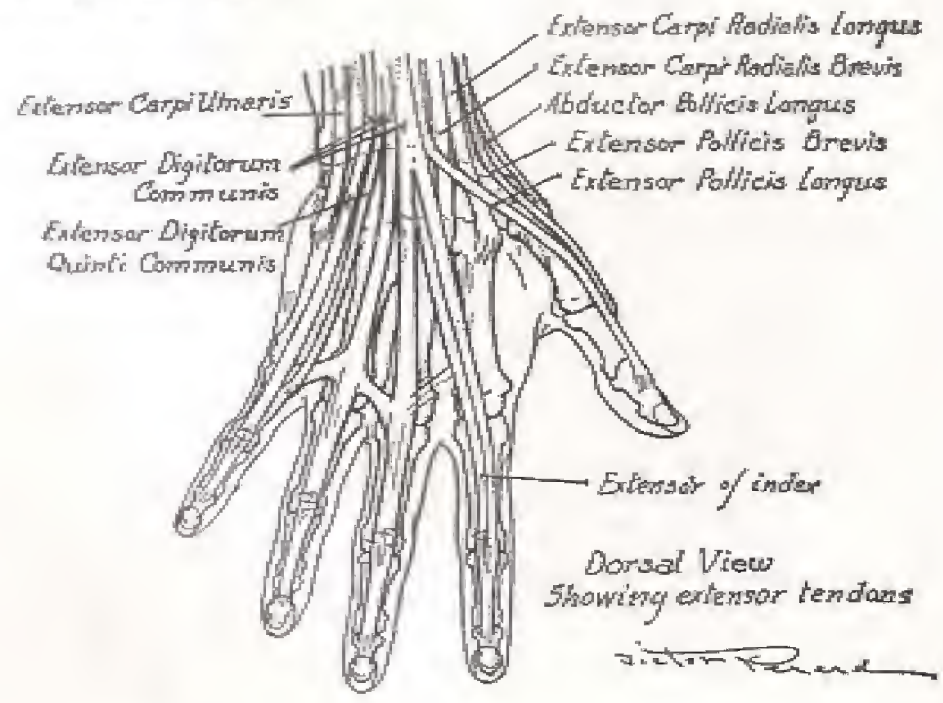


Short muscles of thumb



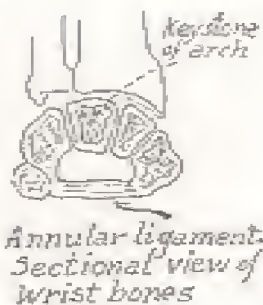


Dorsal View (back)

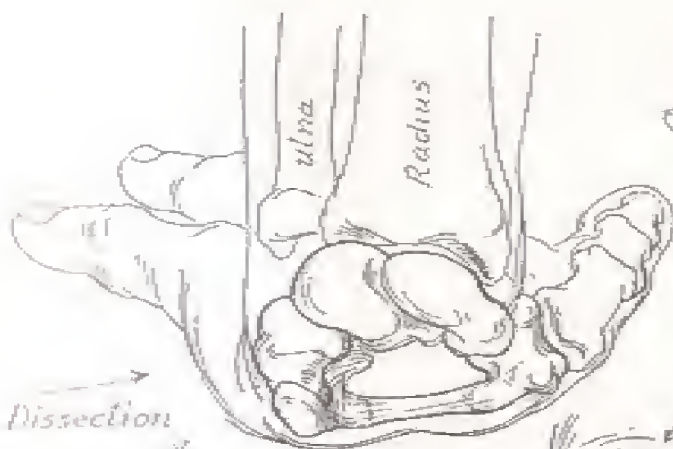




Back view
of wrist



Annular ligament.
Sectional view of
wrist bones



Dissection

The arch formed by the group of wrist bones with the ligament binding the two hook like processes. This forms a canal through which the tendons of the flexor muscles pass.



Flexor tendons
passing under the
arch of the wrist
bones.

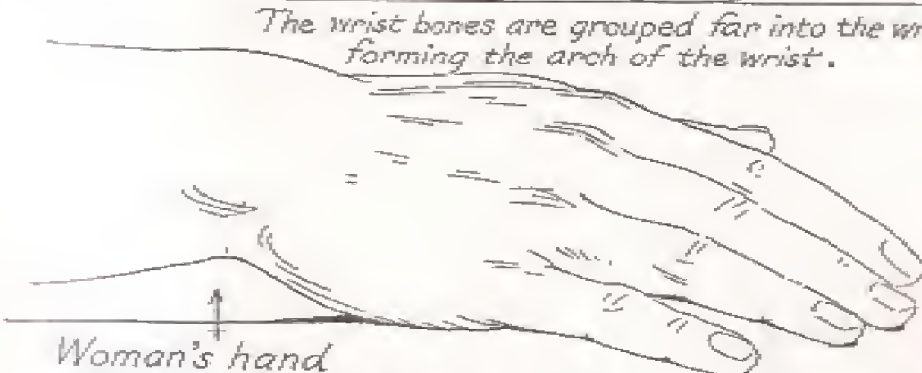
The back of the hand becomes more convex as it nears the wrist.



When the hand is resting on a flat surface, the wrist does not come in contact with that surface.

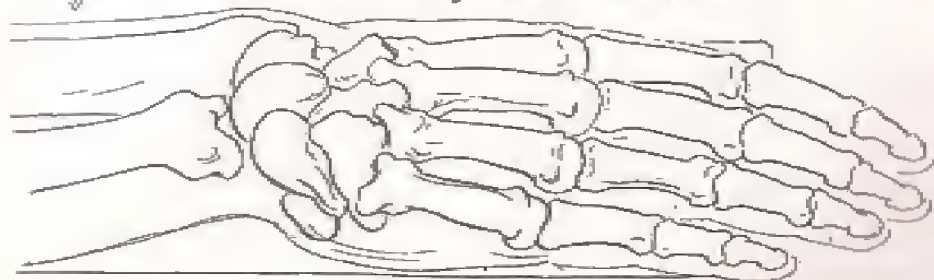


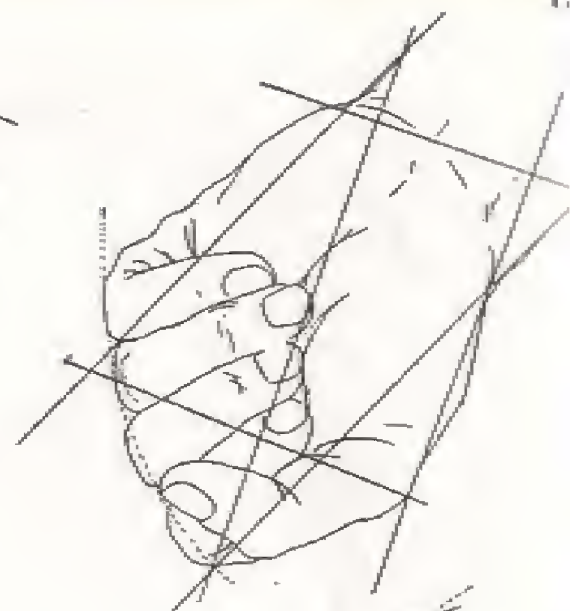
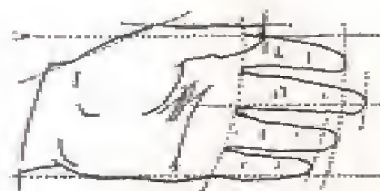
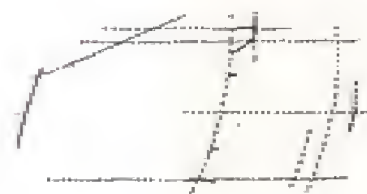
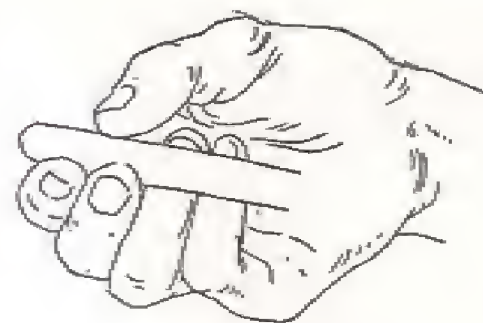
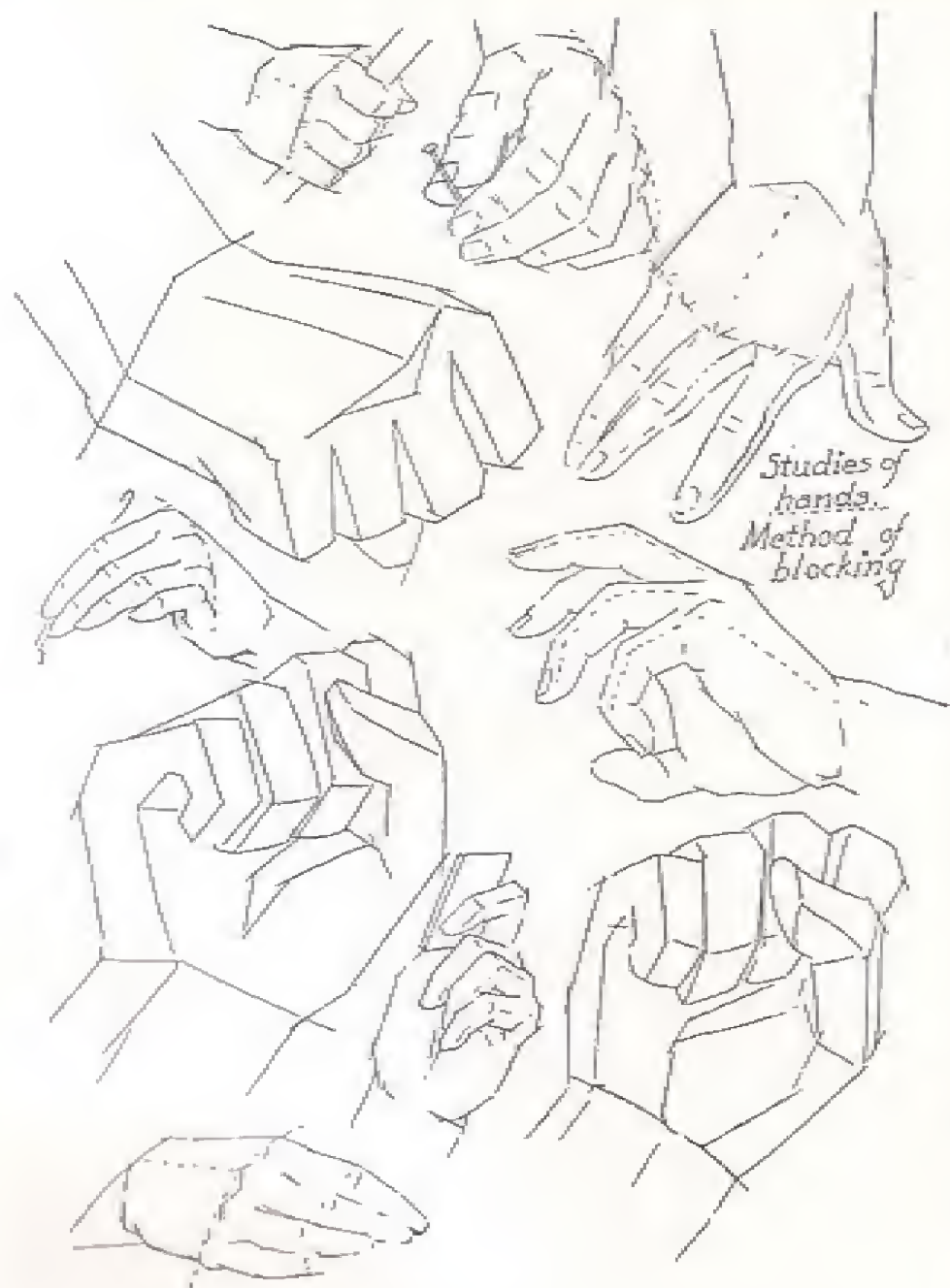
The wrist bones are grouped far into the wrist forming the arch of the wrist.



Woman's hand

Relative positions of the bones from the little finger side when the hand is resting on a flat surface.

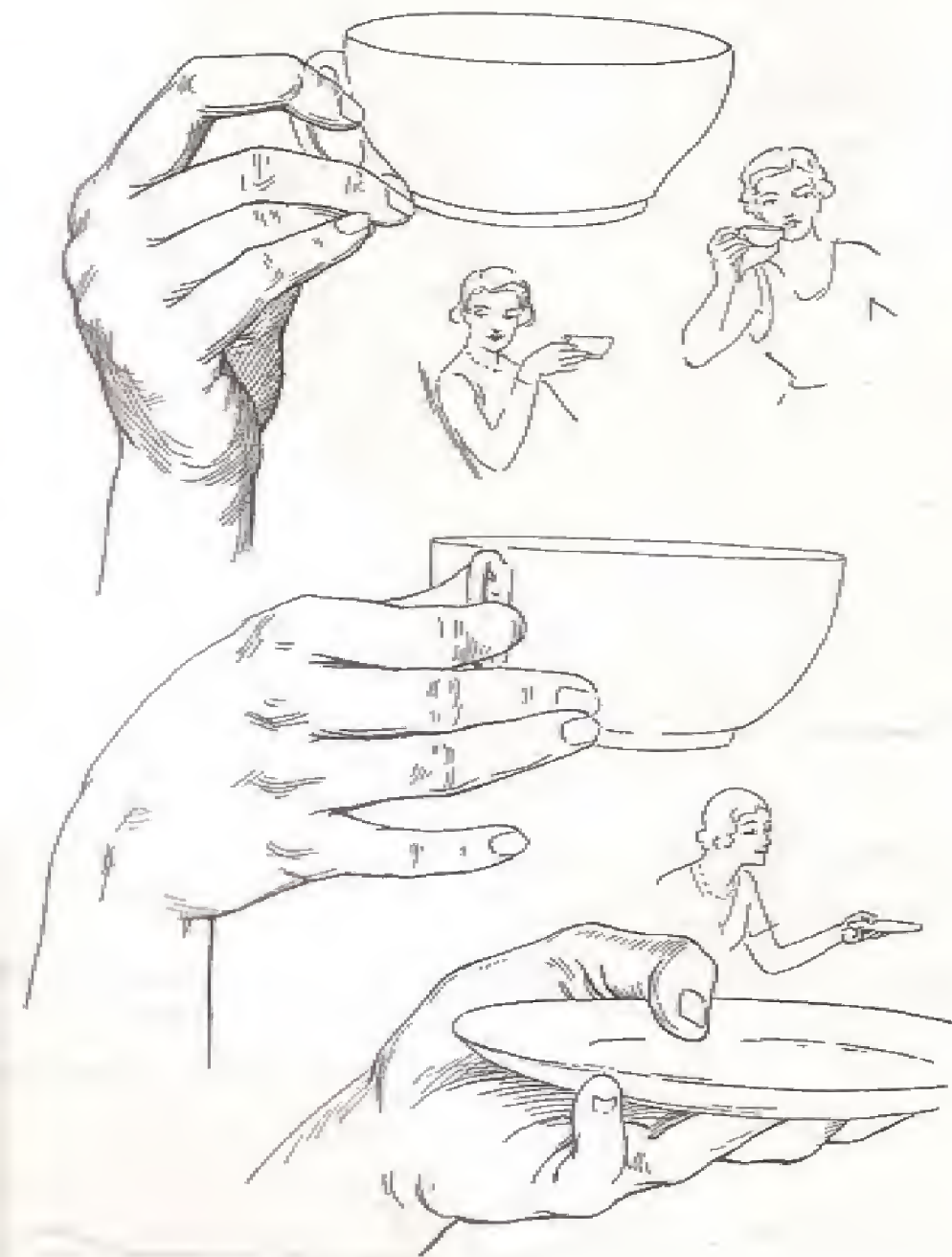


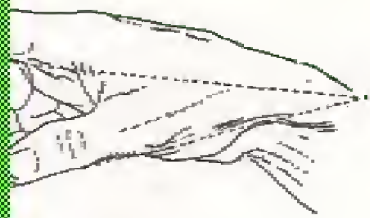


Showing the use of imaginary lines
to obtain proportion



Victor Peruch

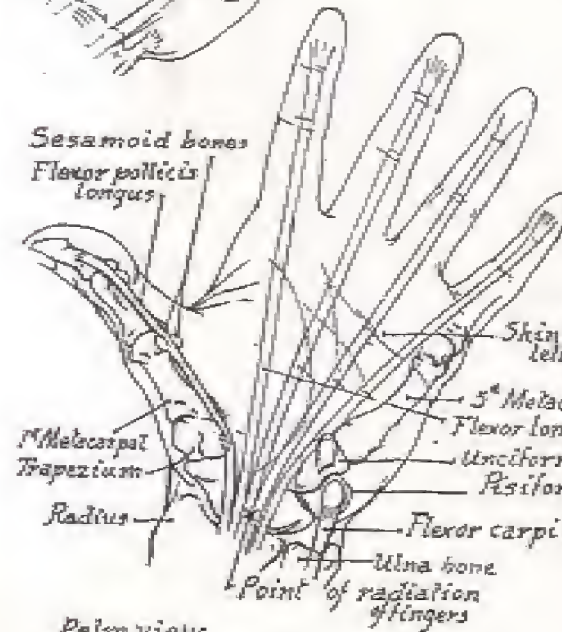




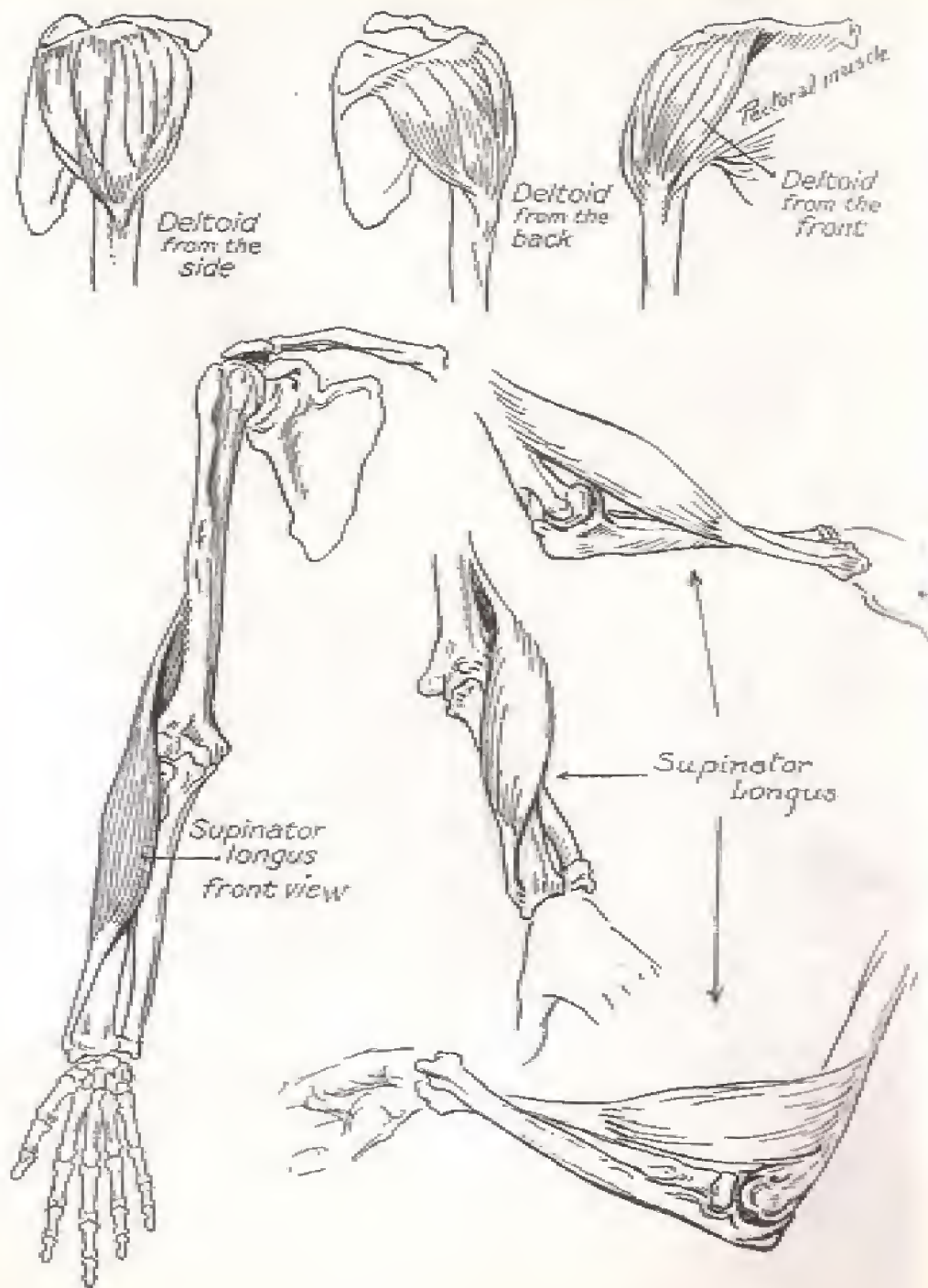
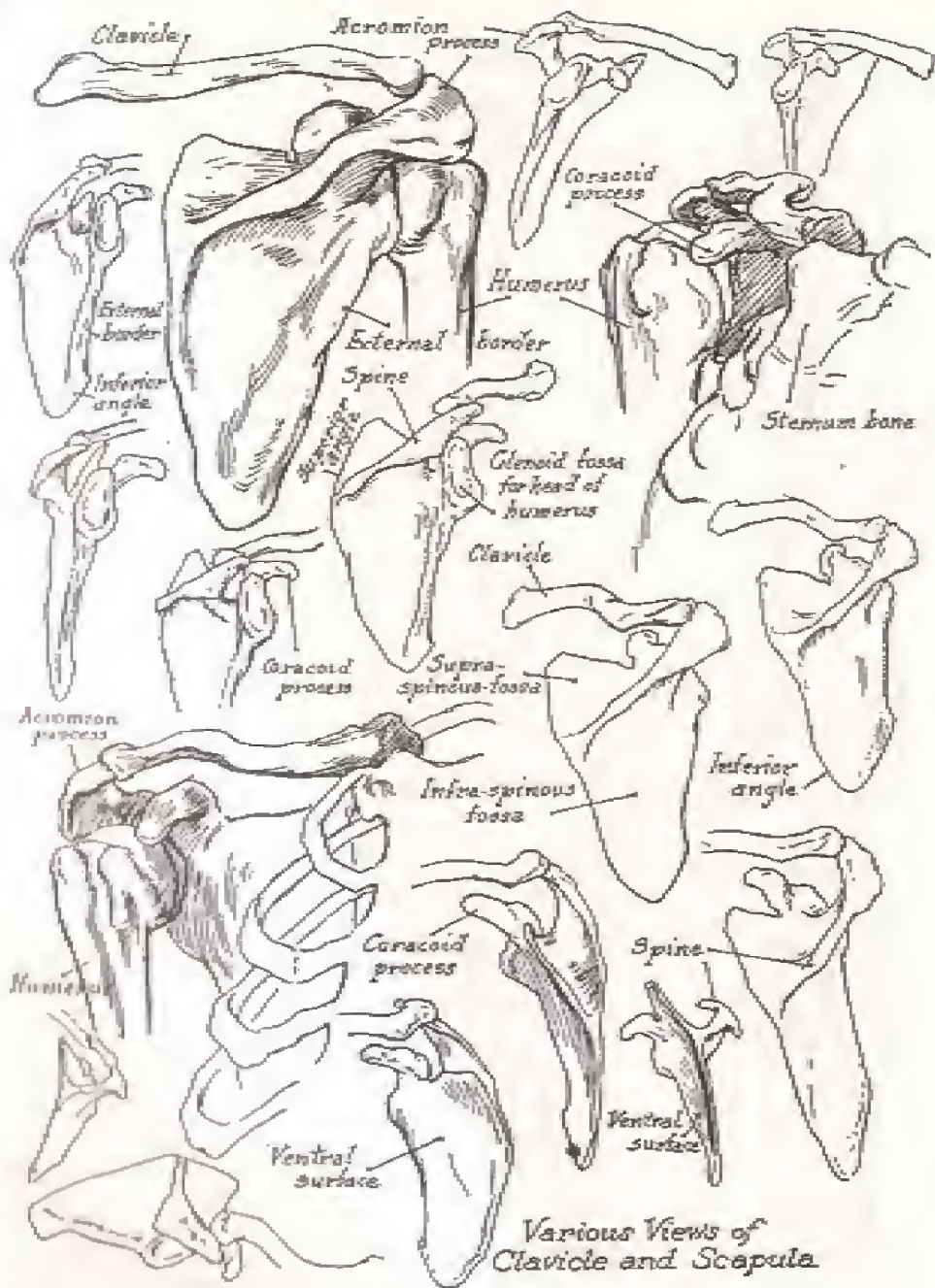
of imaginary lines
tion

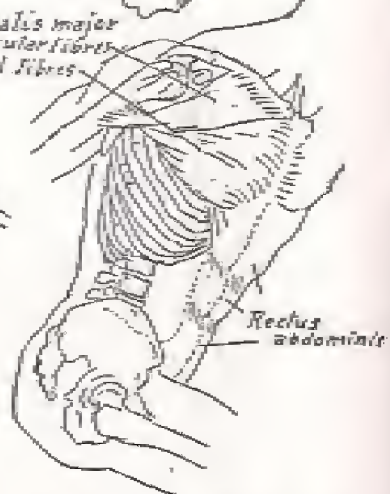
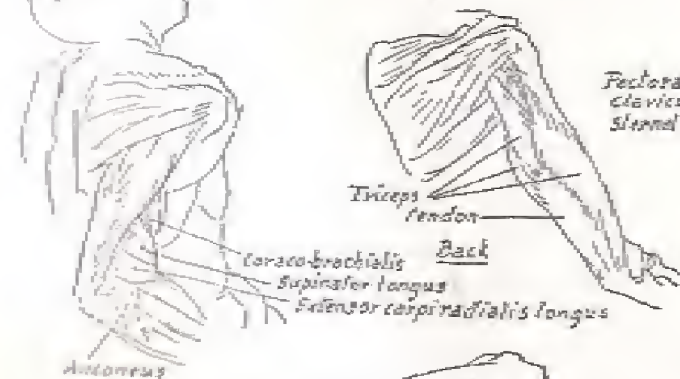
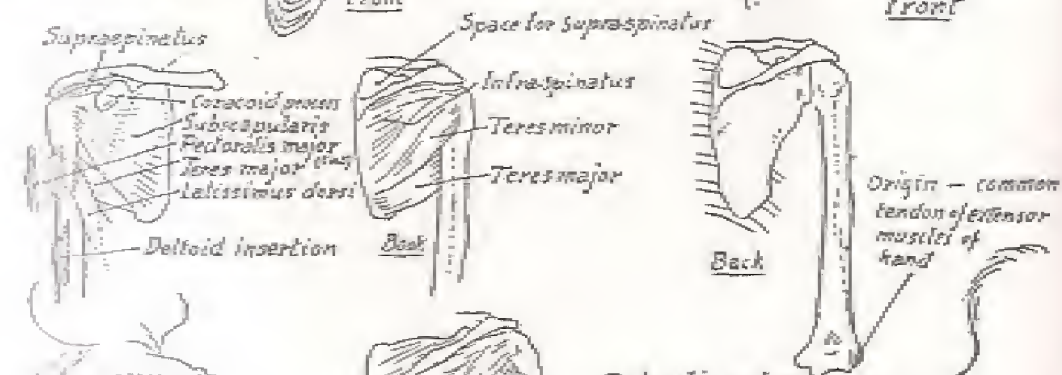
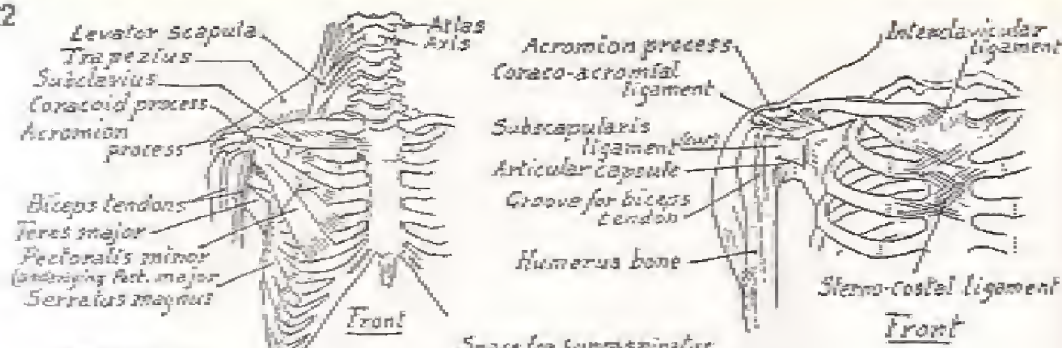


Sesamoid bones
Flexor pollicis longus

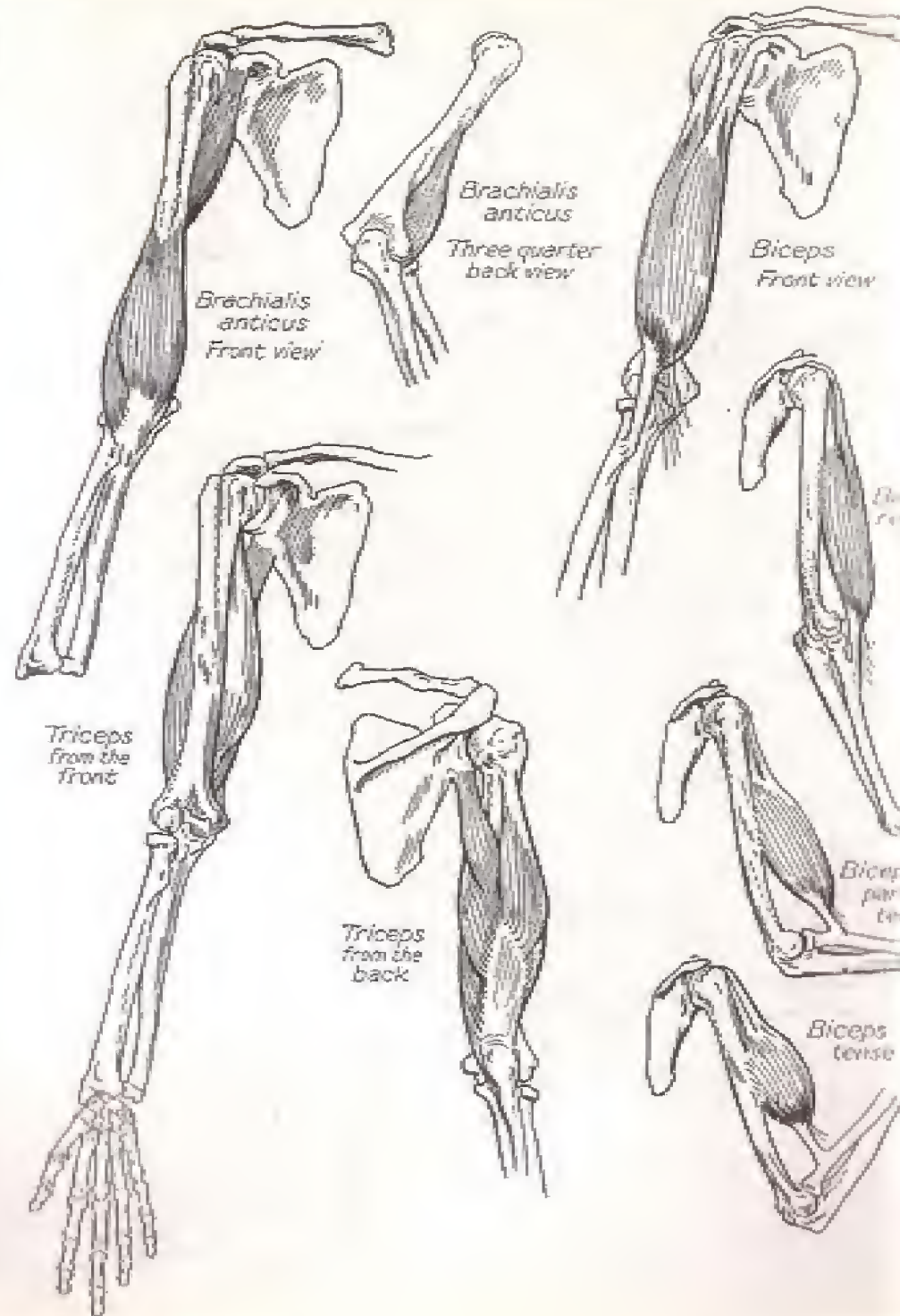


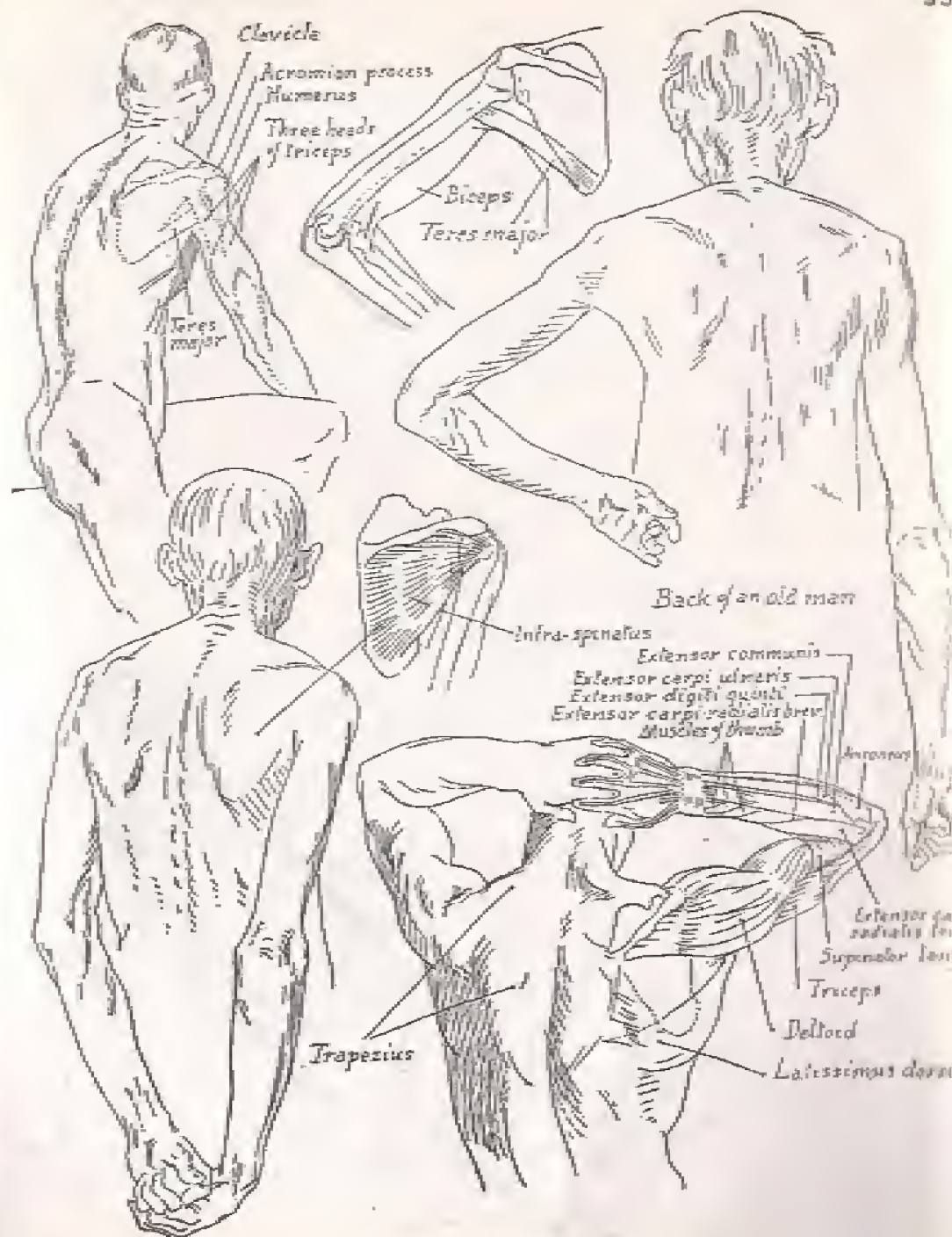
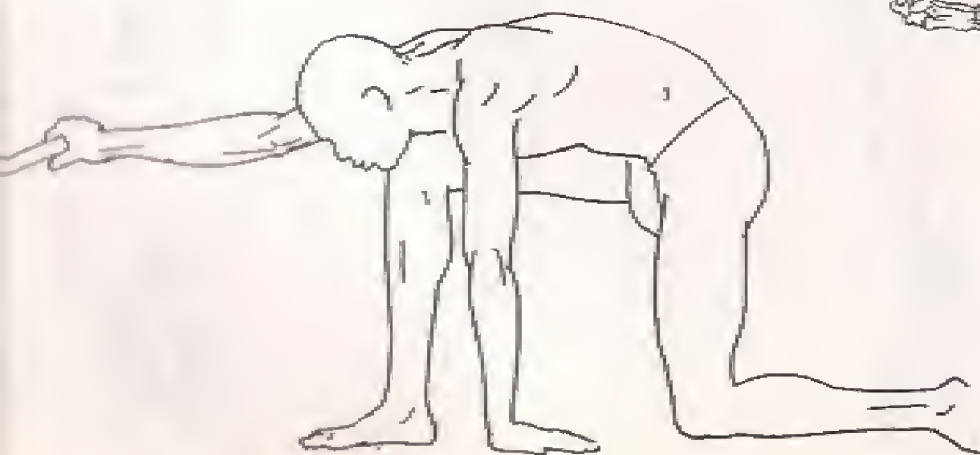
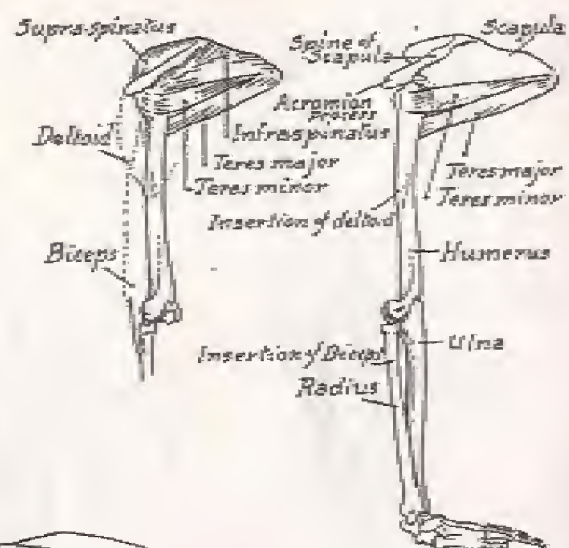
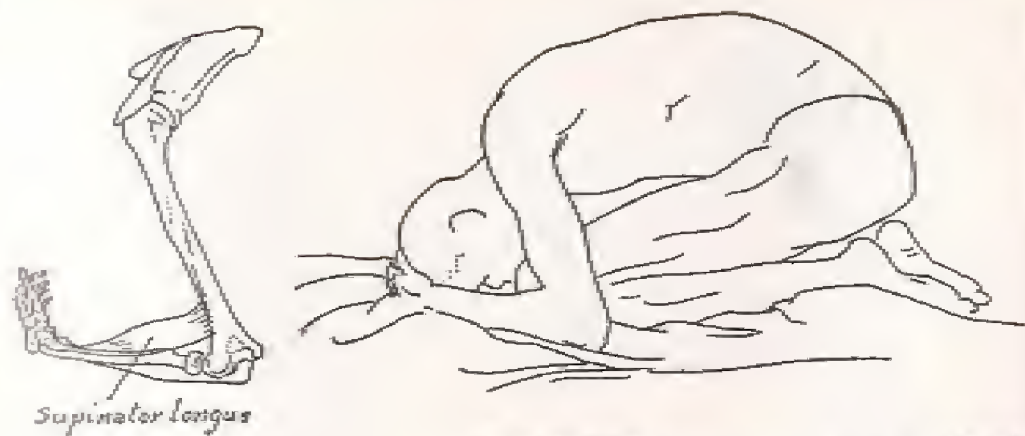
Palm view

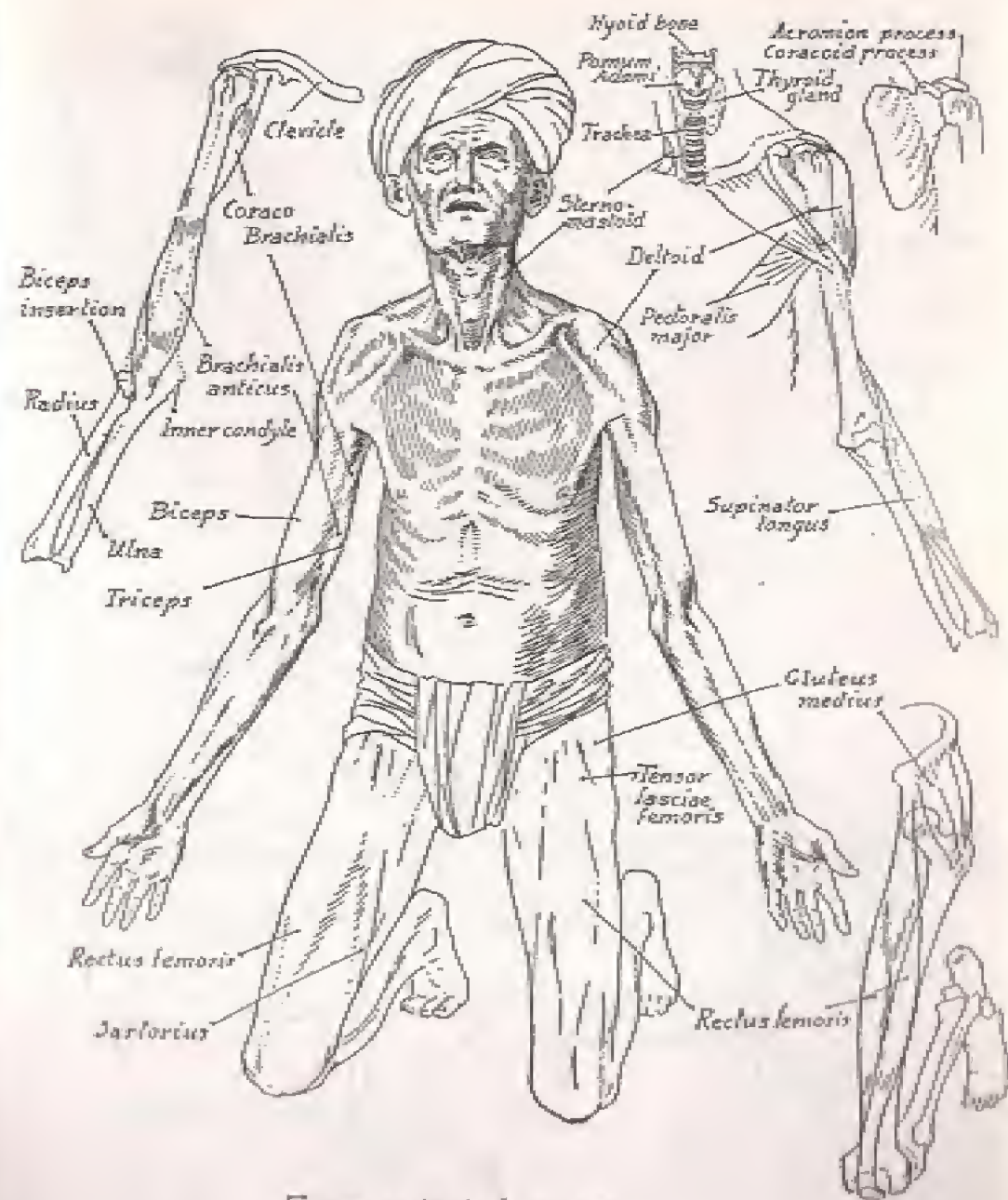
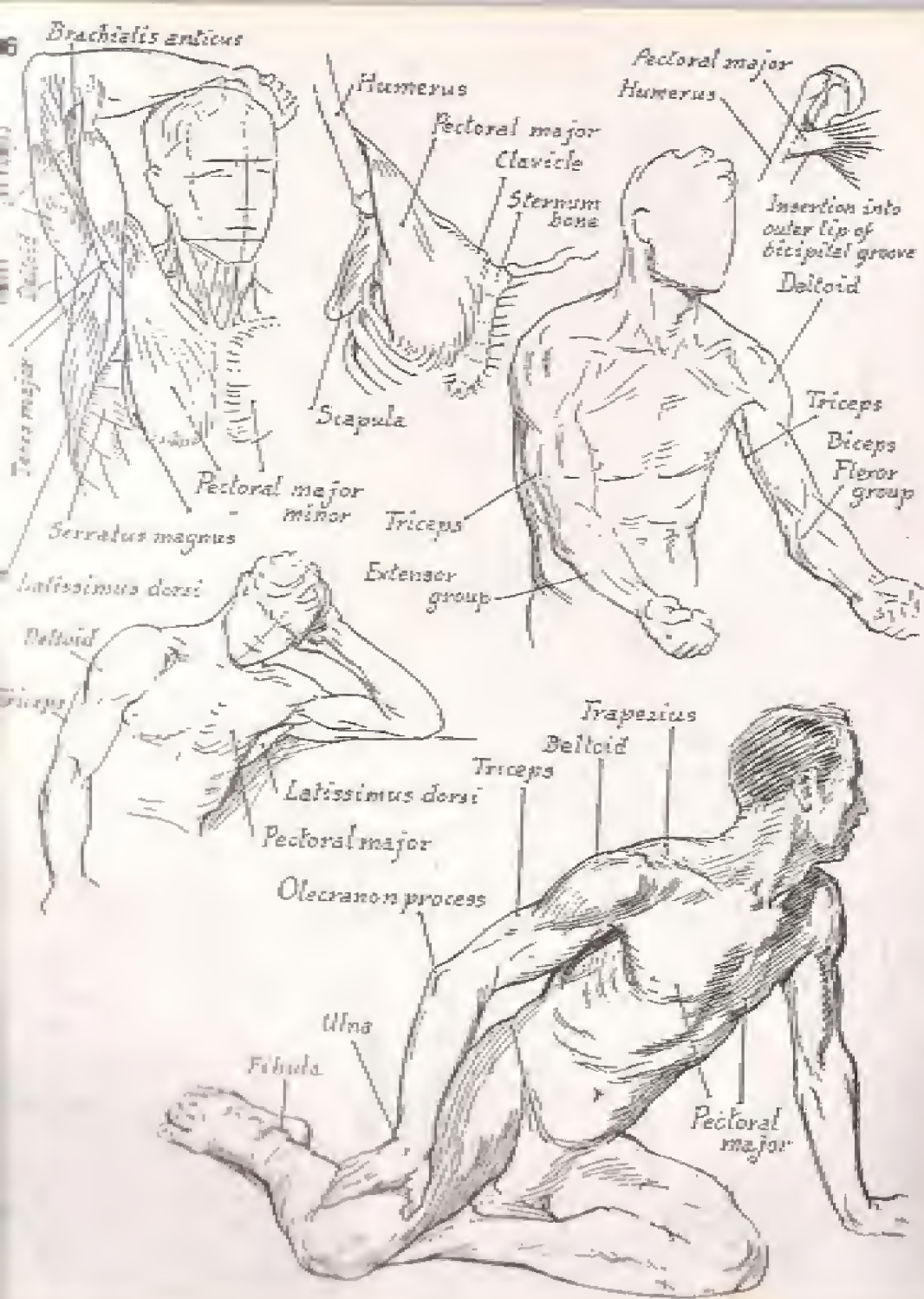




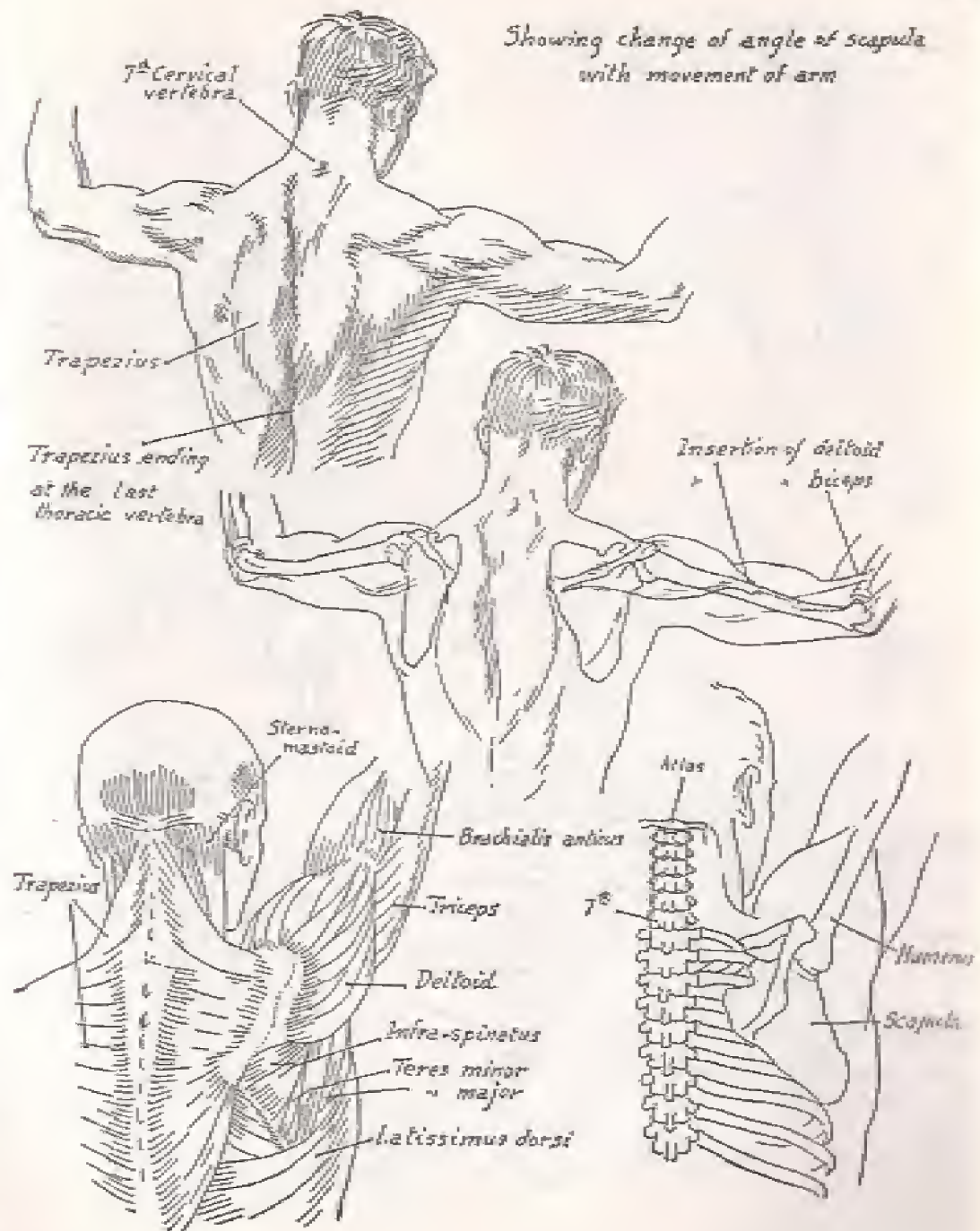
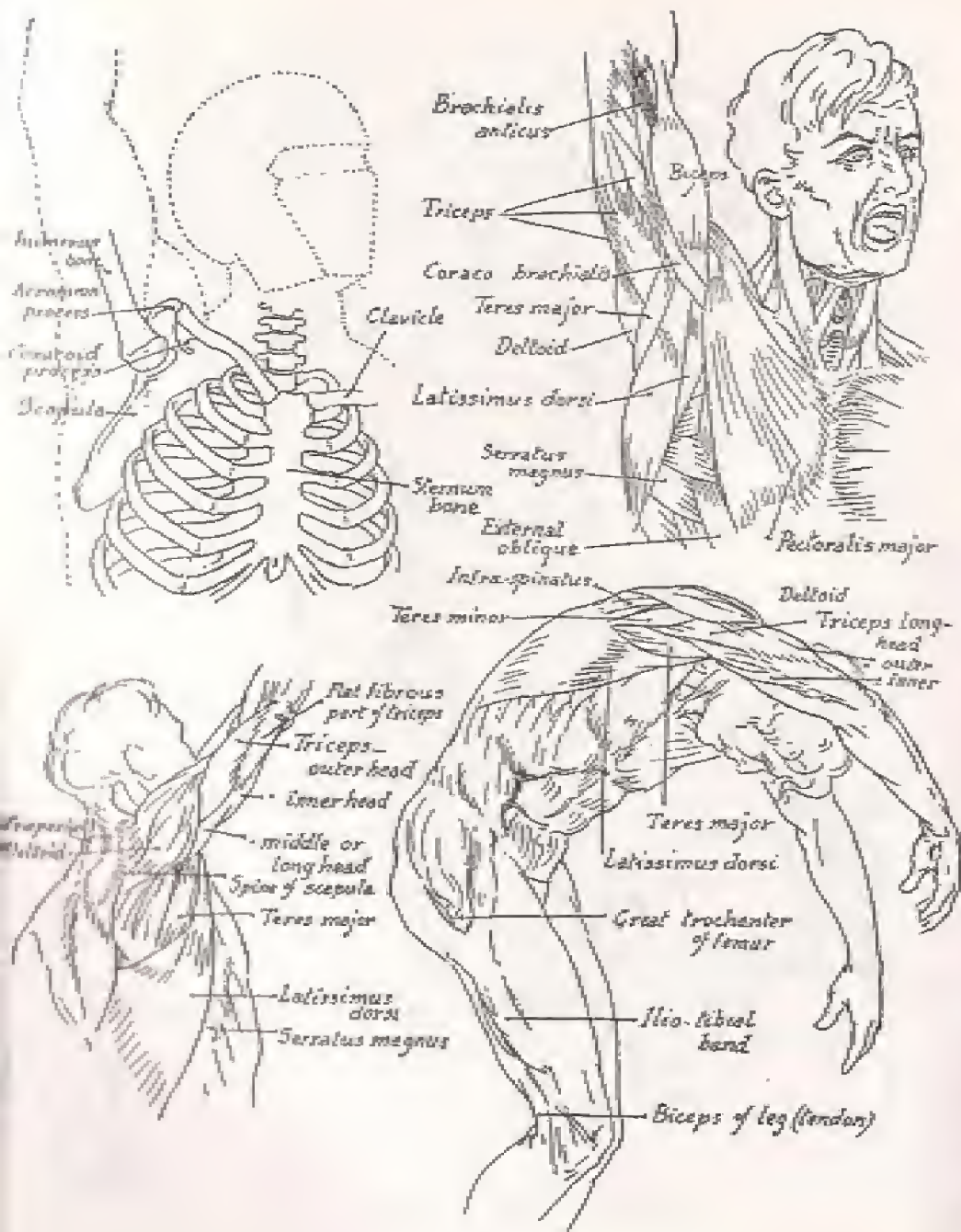
Studies of shoulder girdle, grouped for comparison

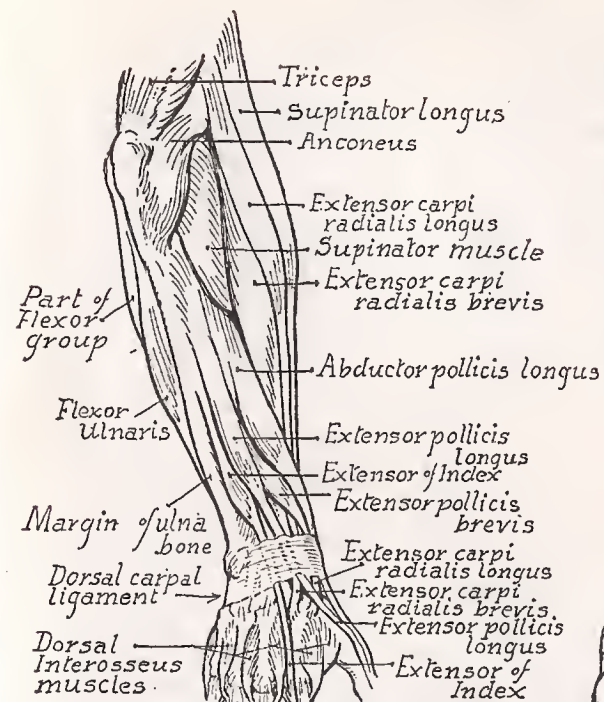
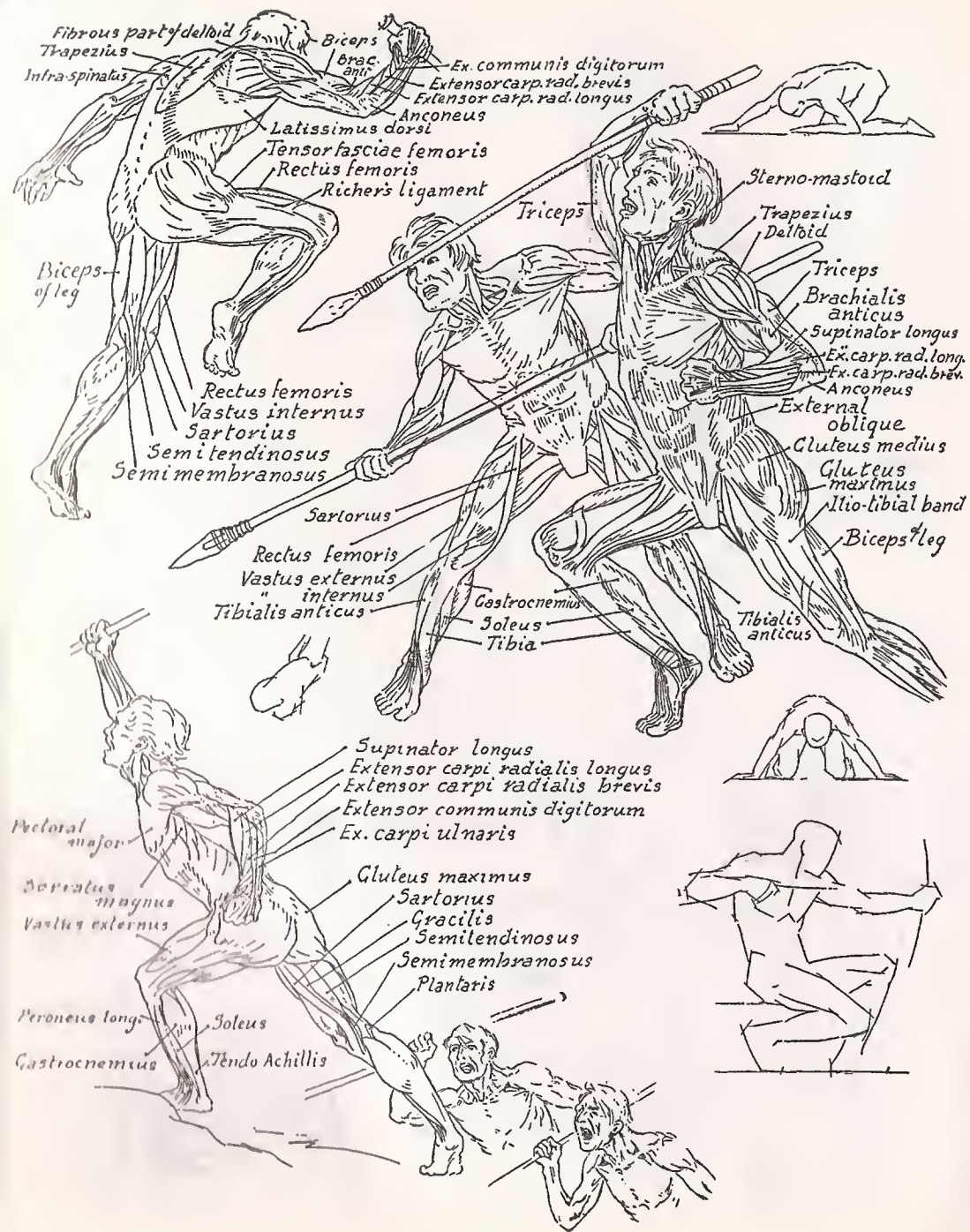




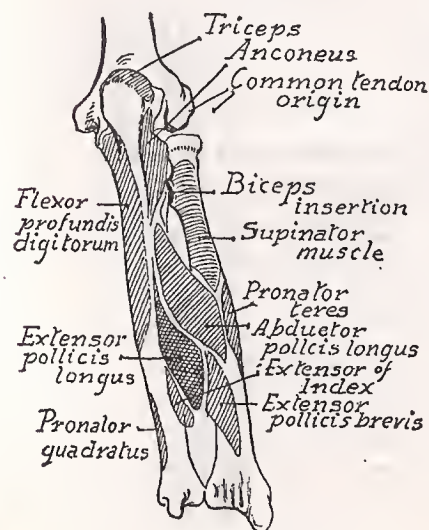


Emaciated figure

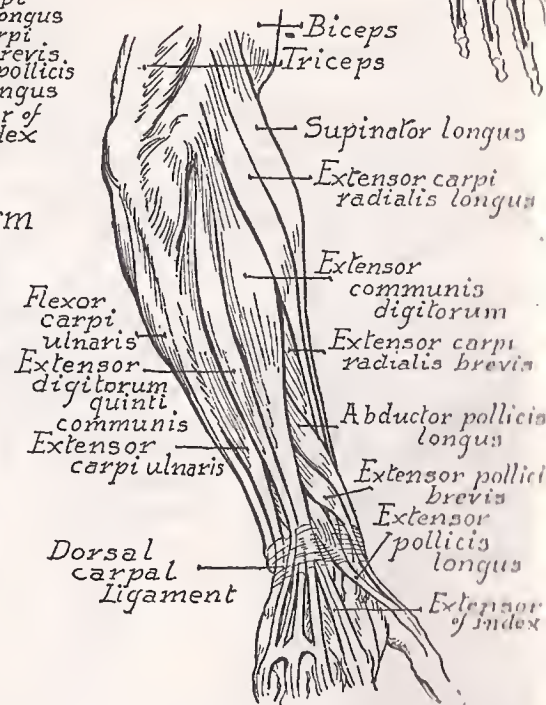
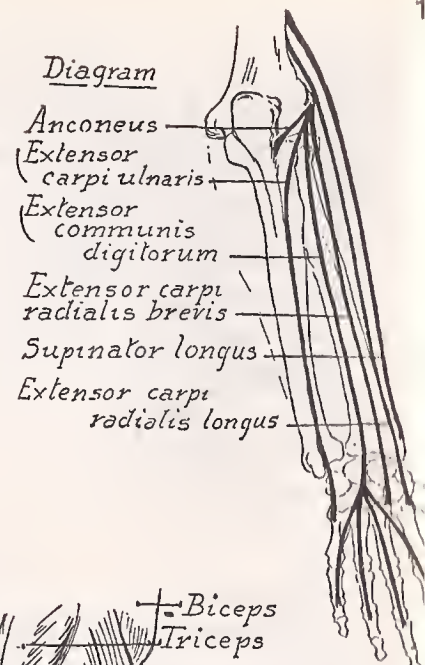




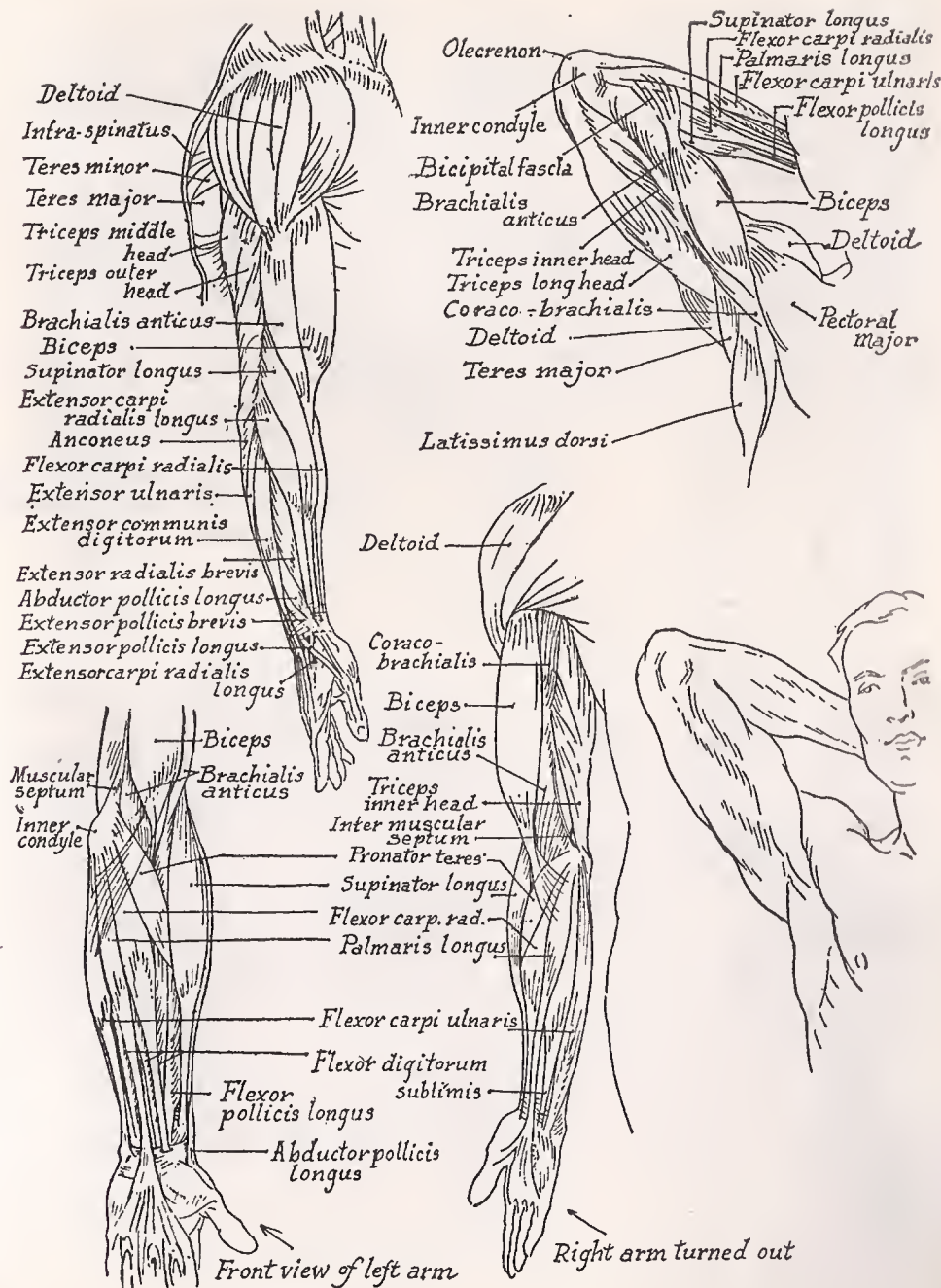
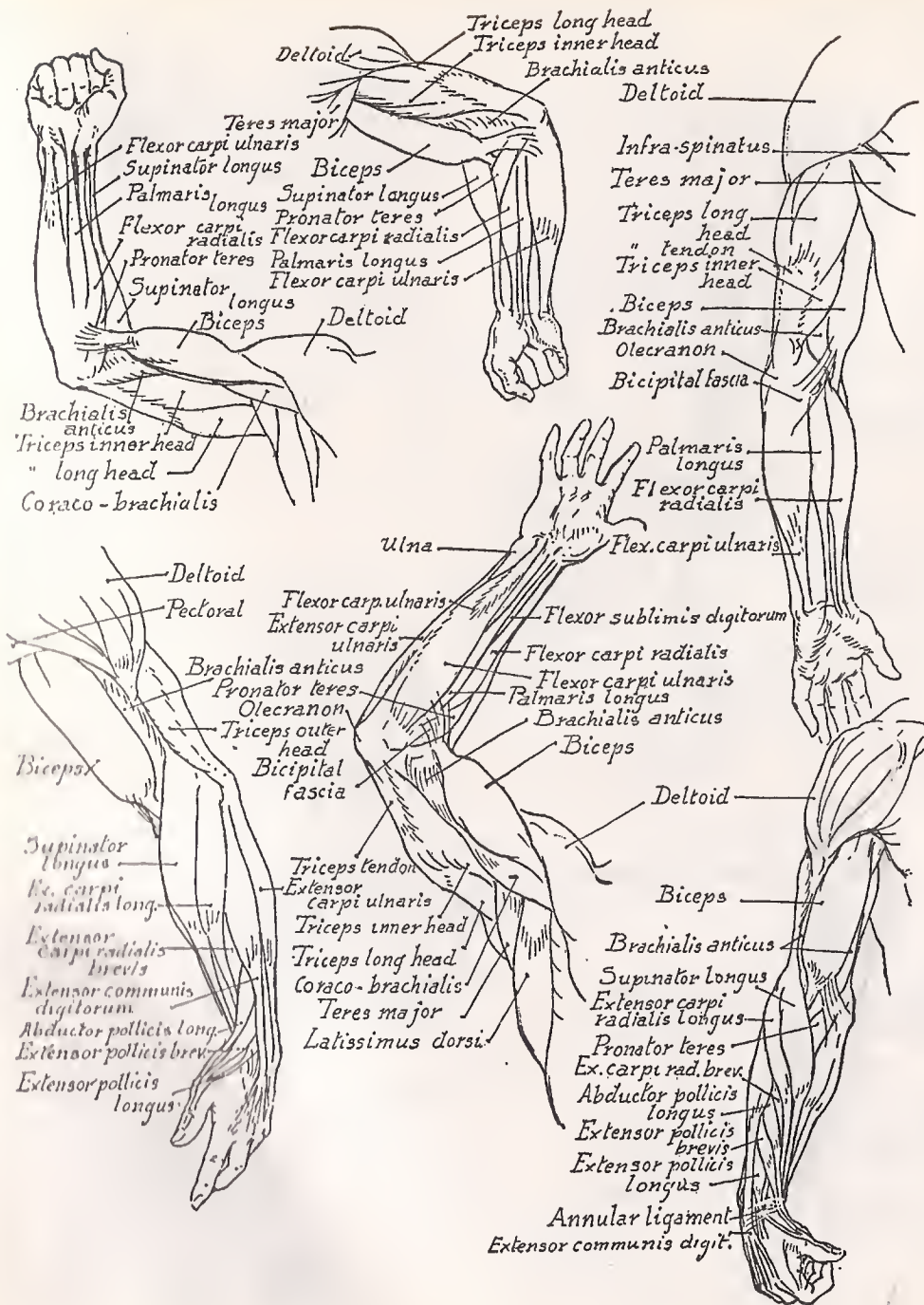
Deep Muscles
Dorsal side of Arm

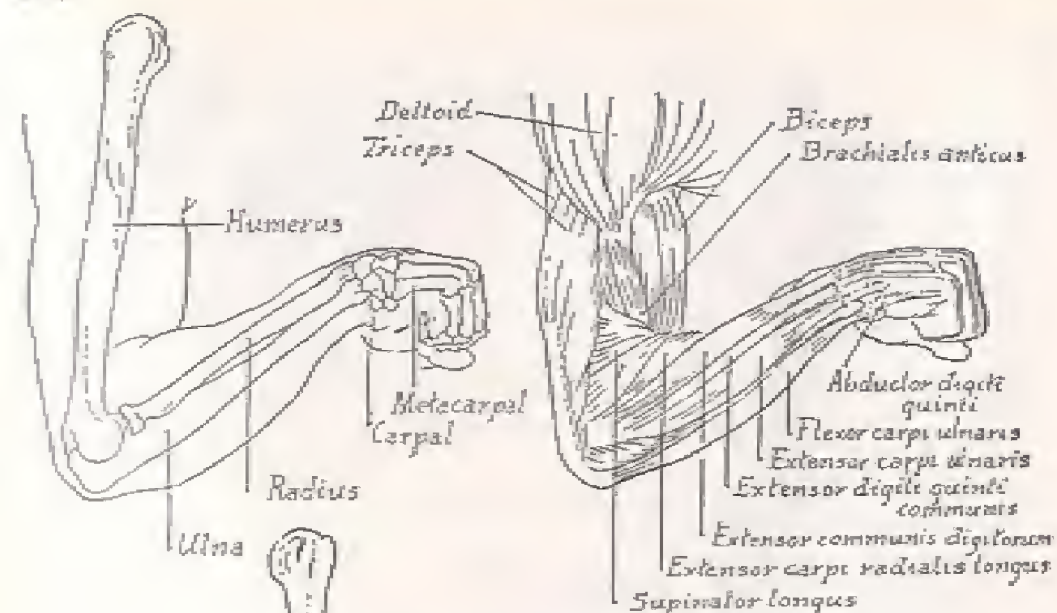


Muscle Attachments

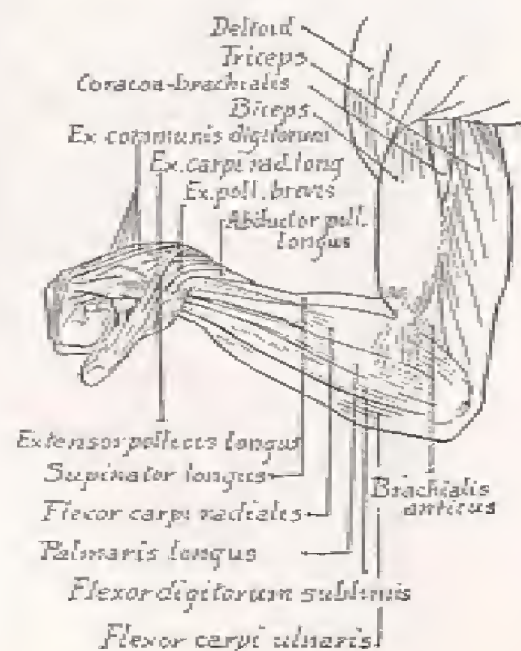


Surface Muscles
Dorsal side of Arm

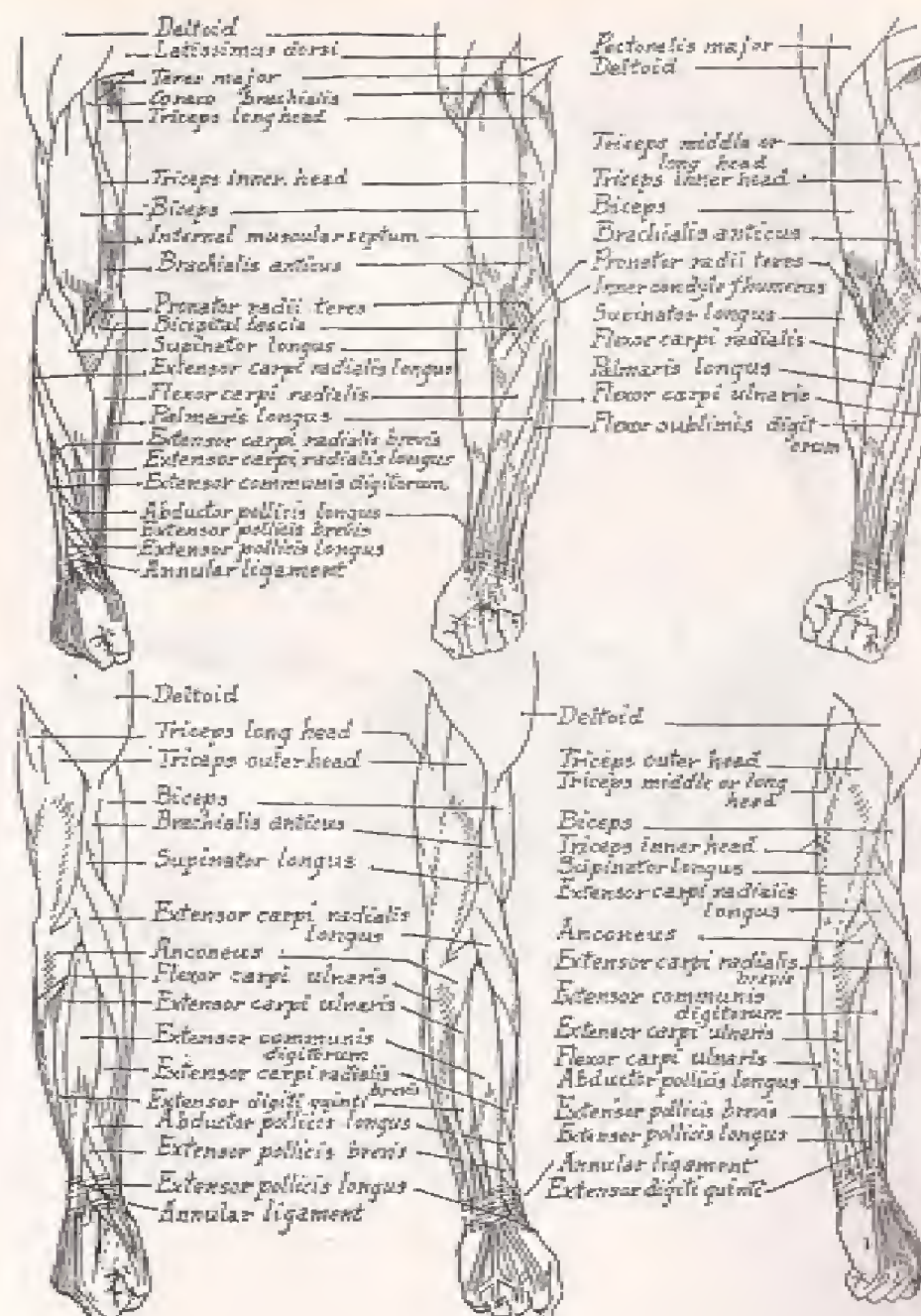


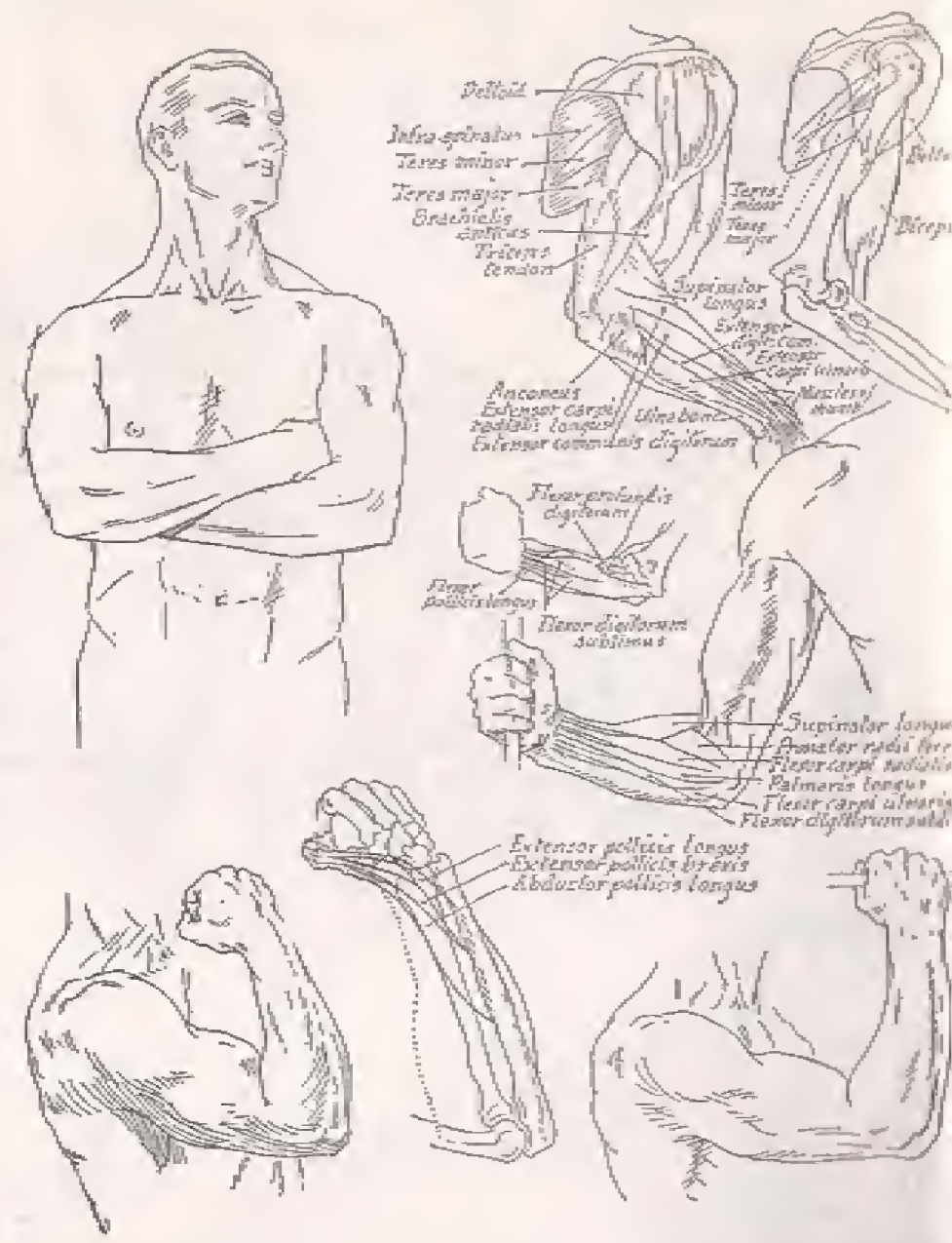
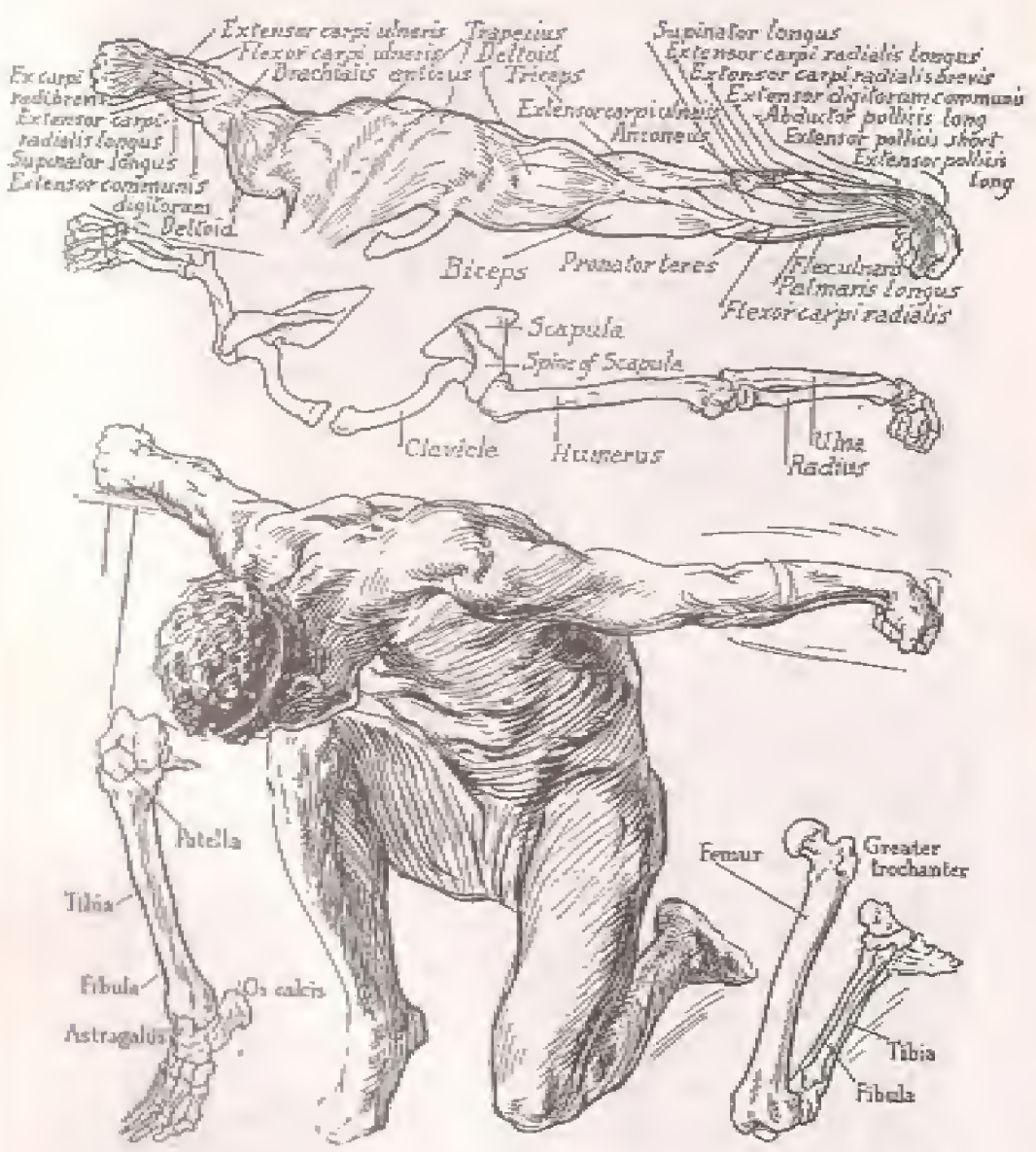


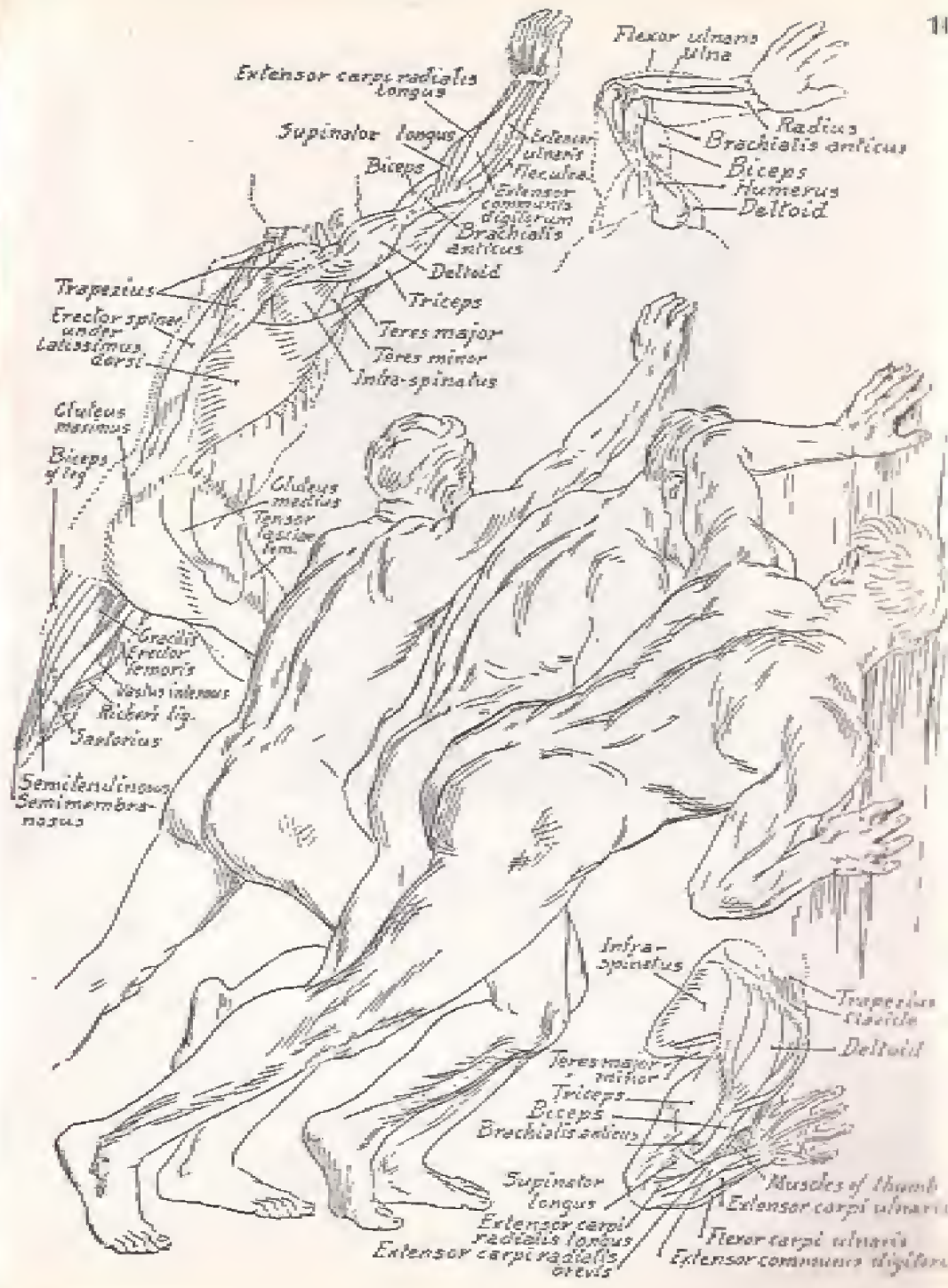
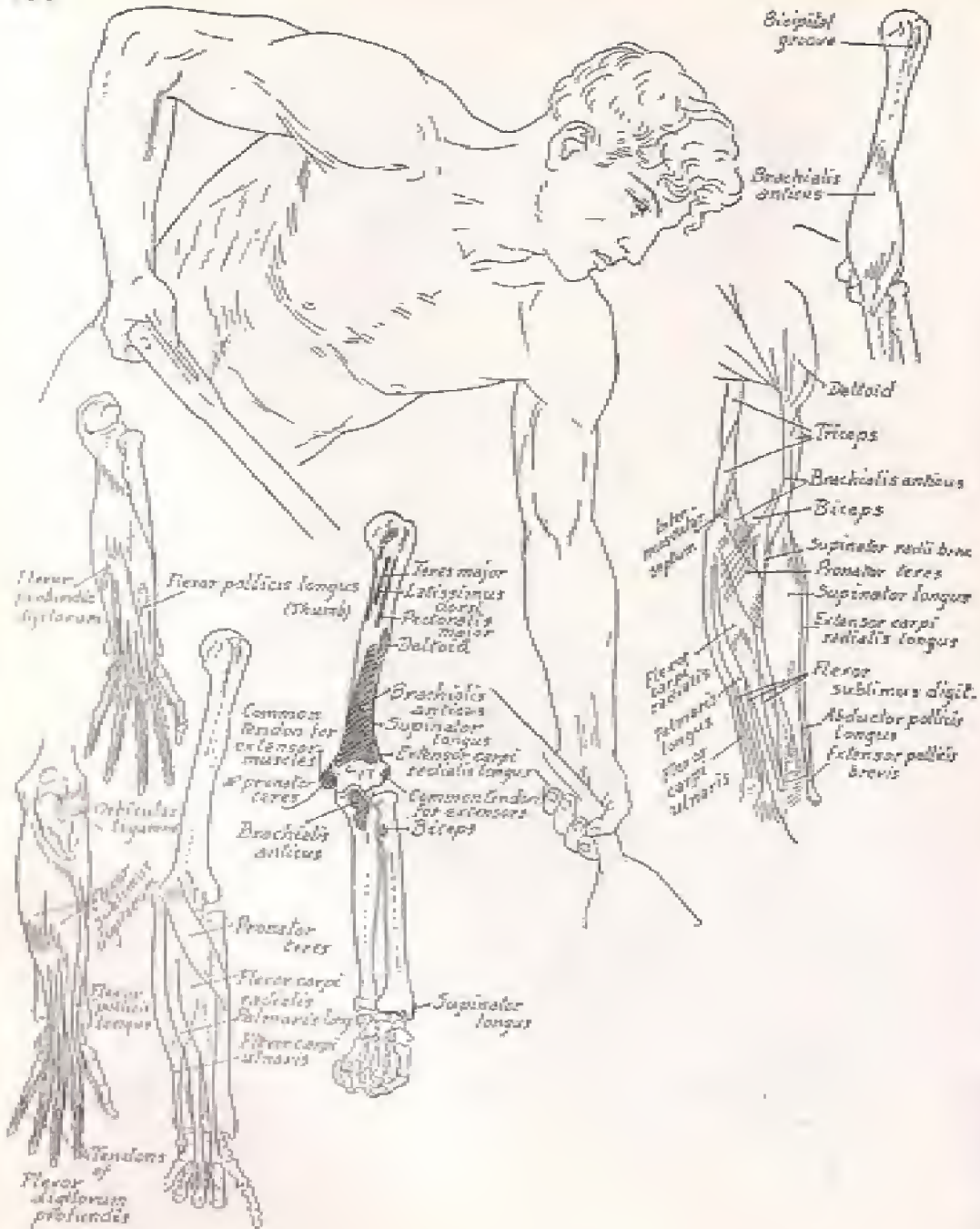
Outer View of Right Arm



Inner view



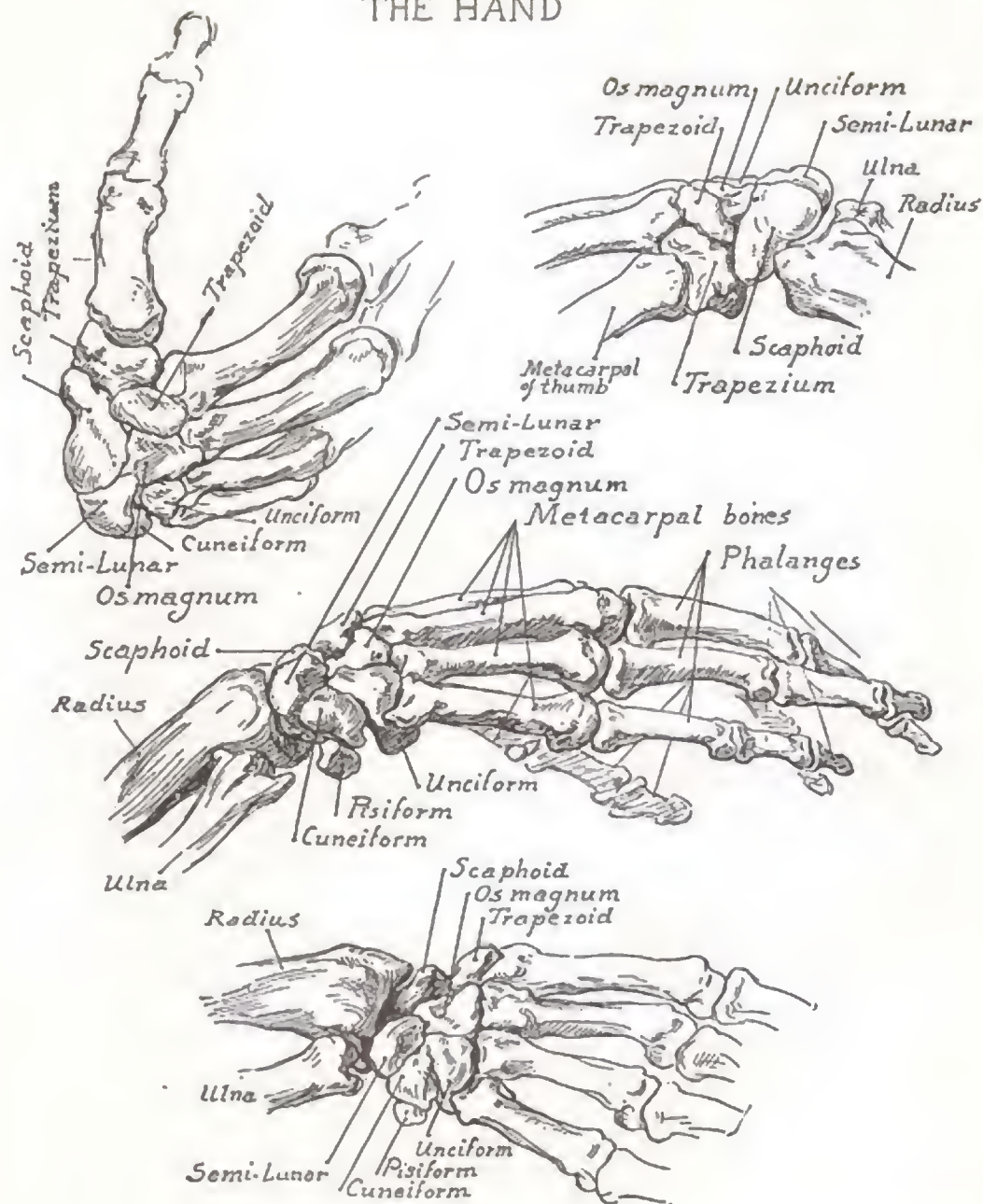


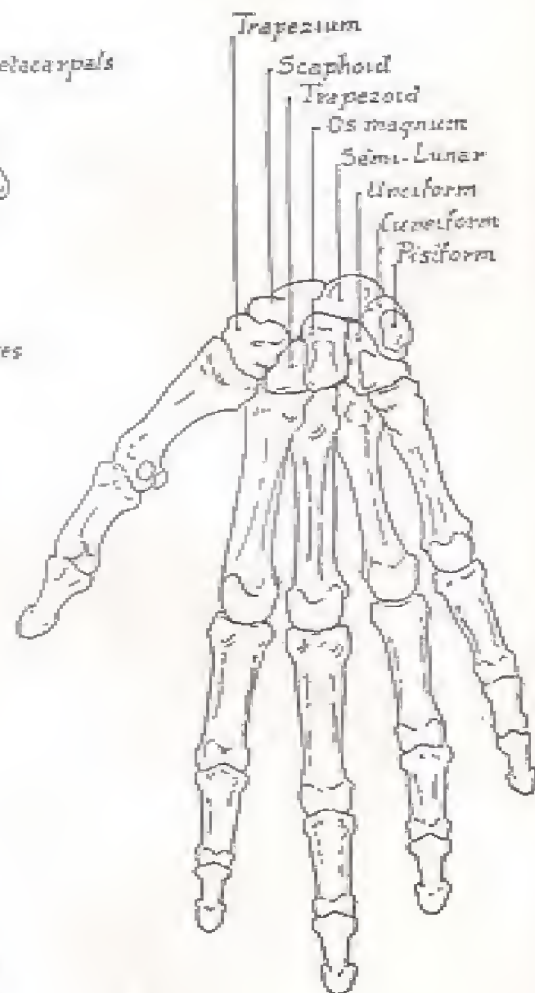
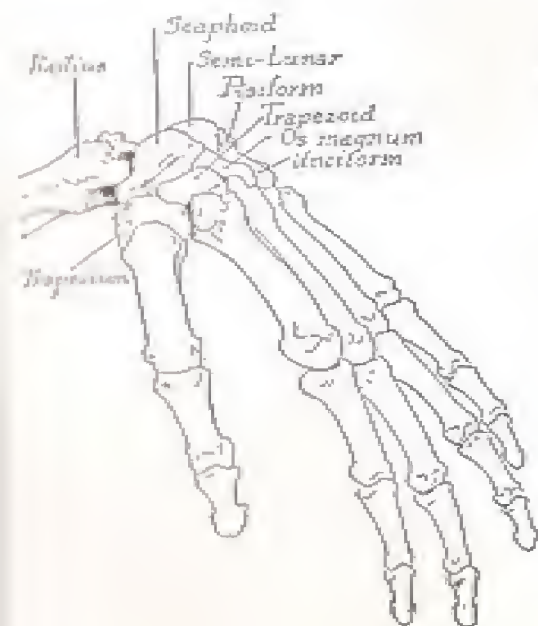




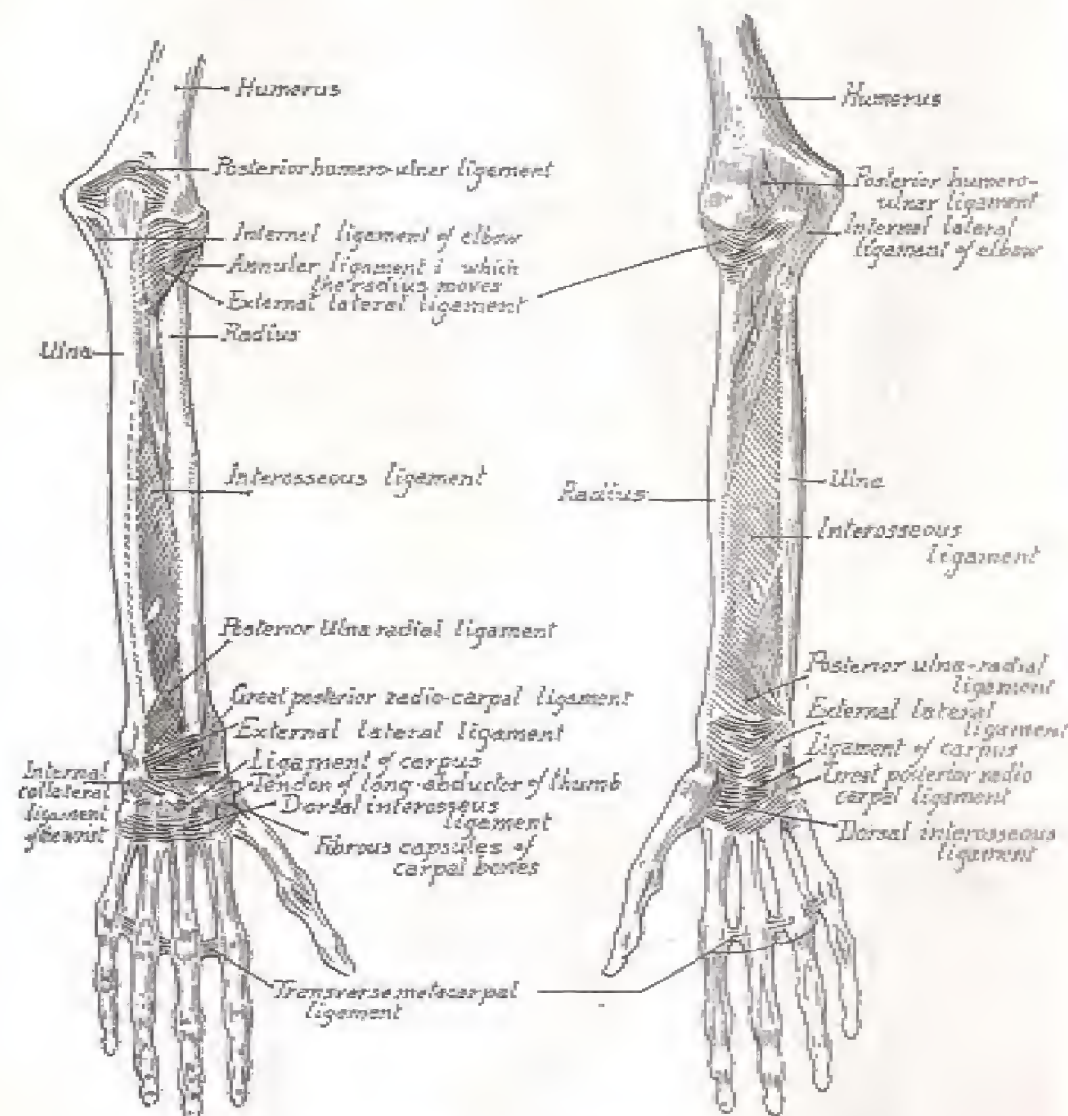
PART VI
THE HAND

THE HAND



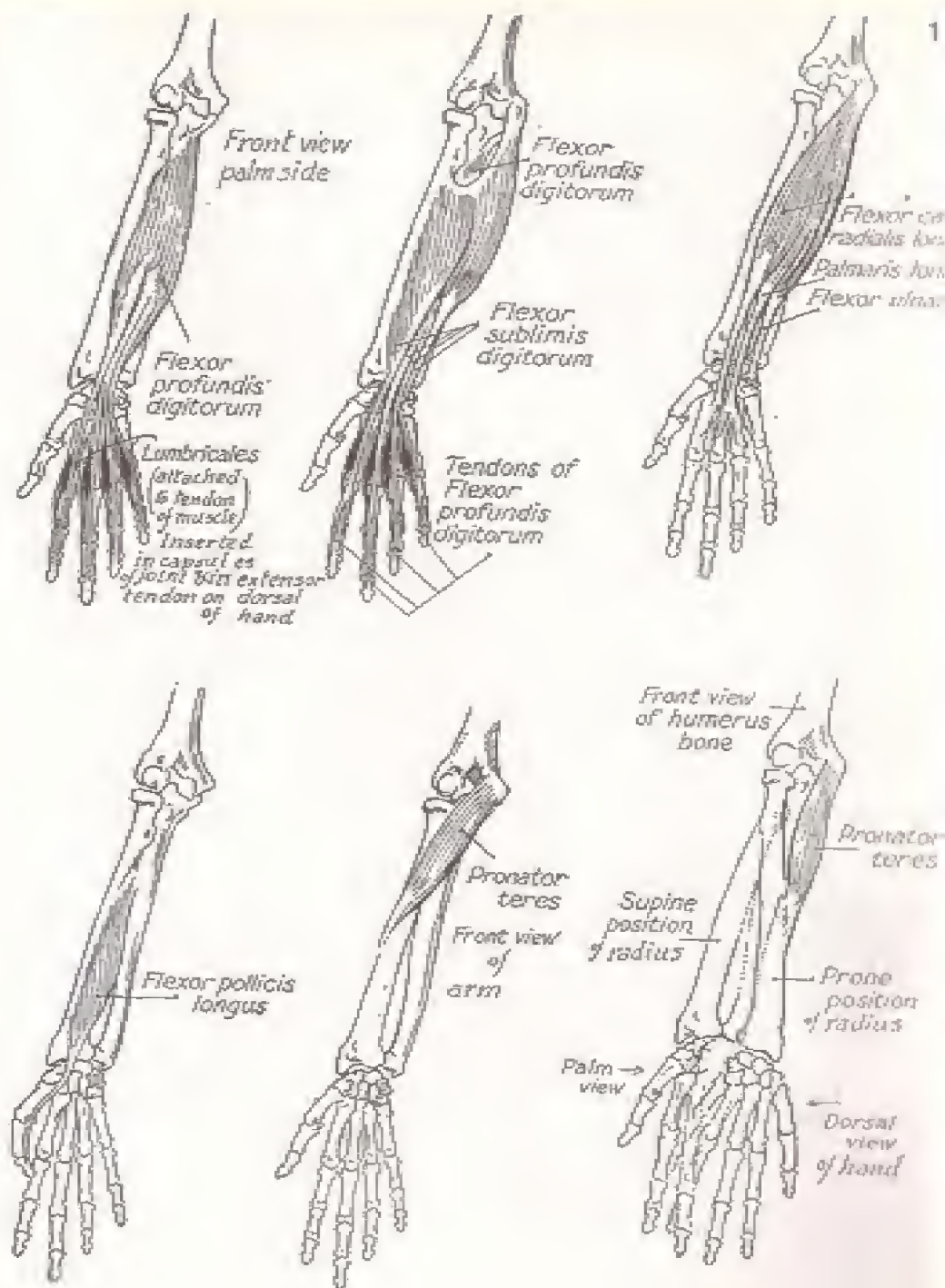
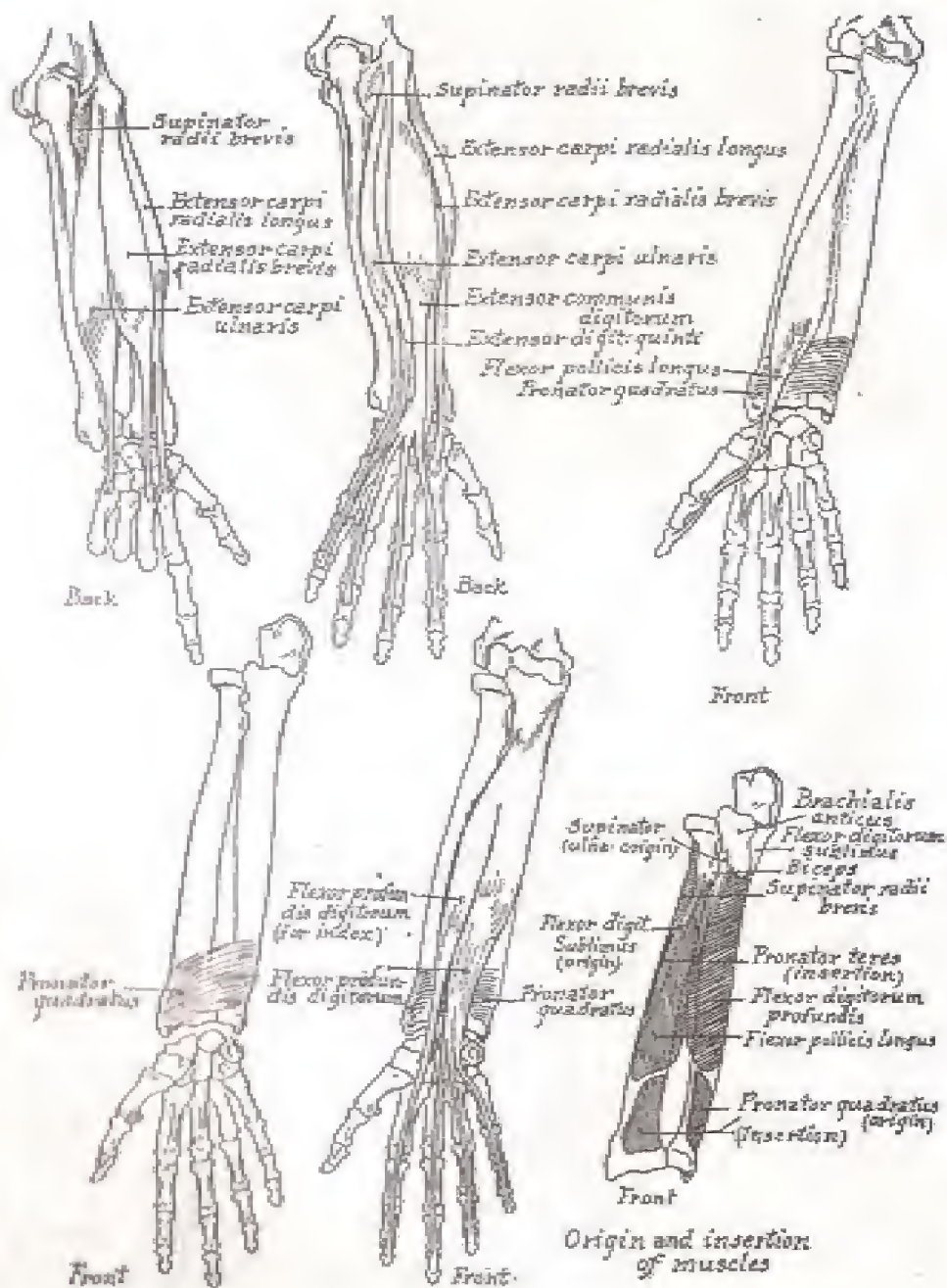


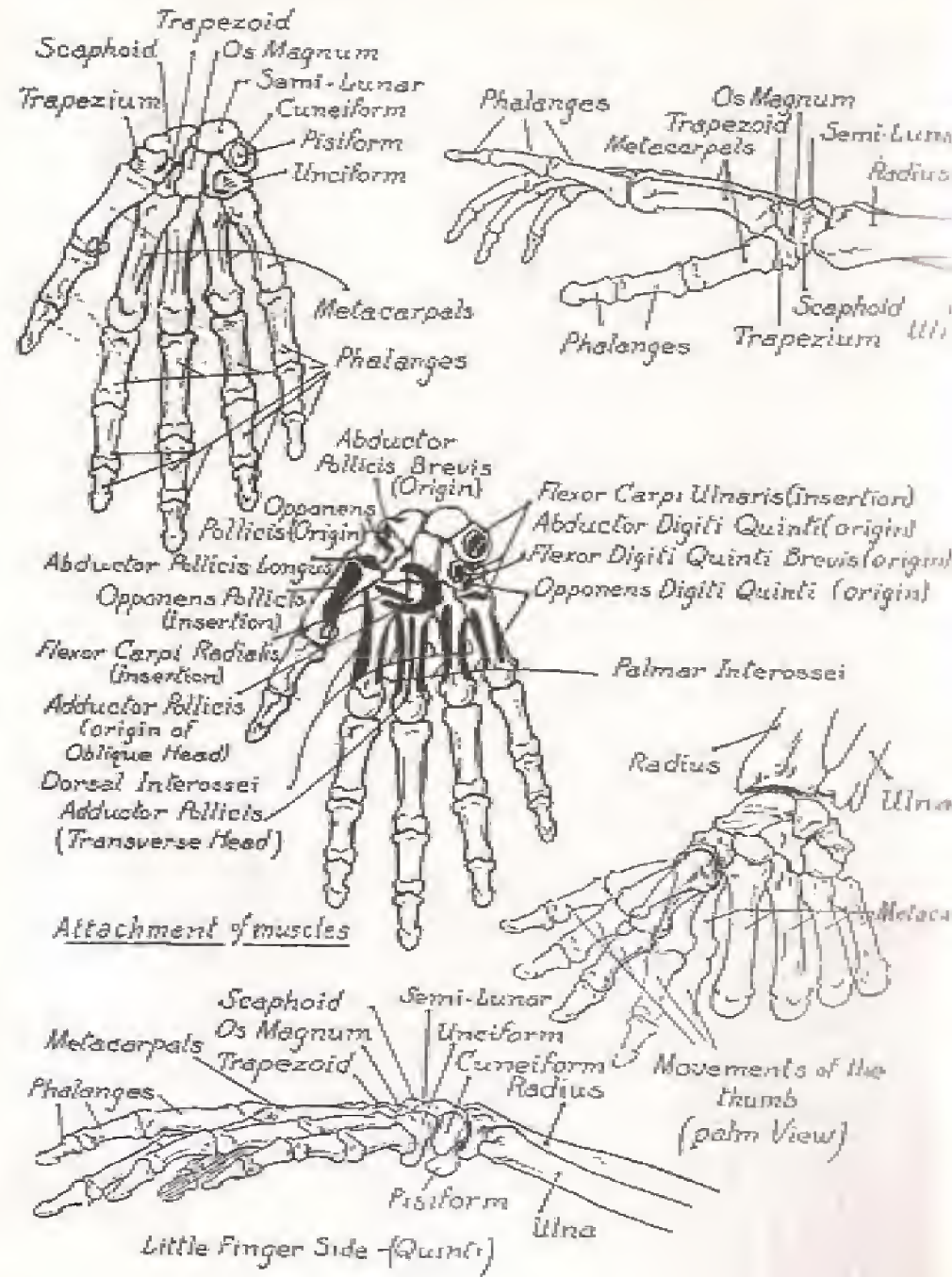
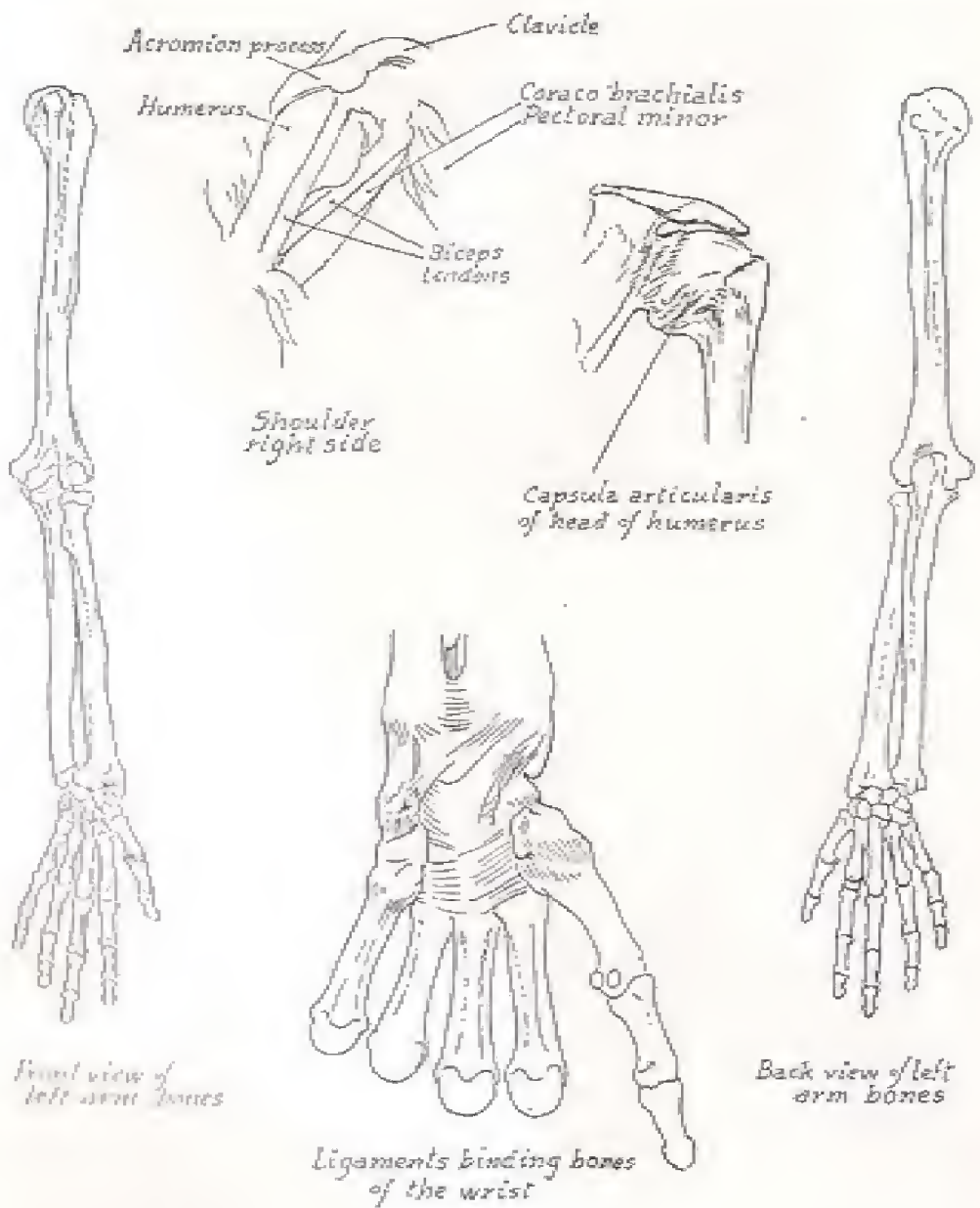
Palm view



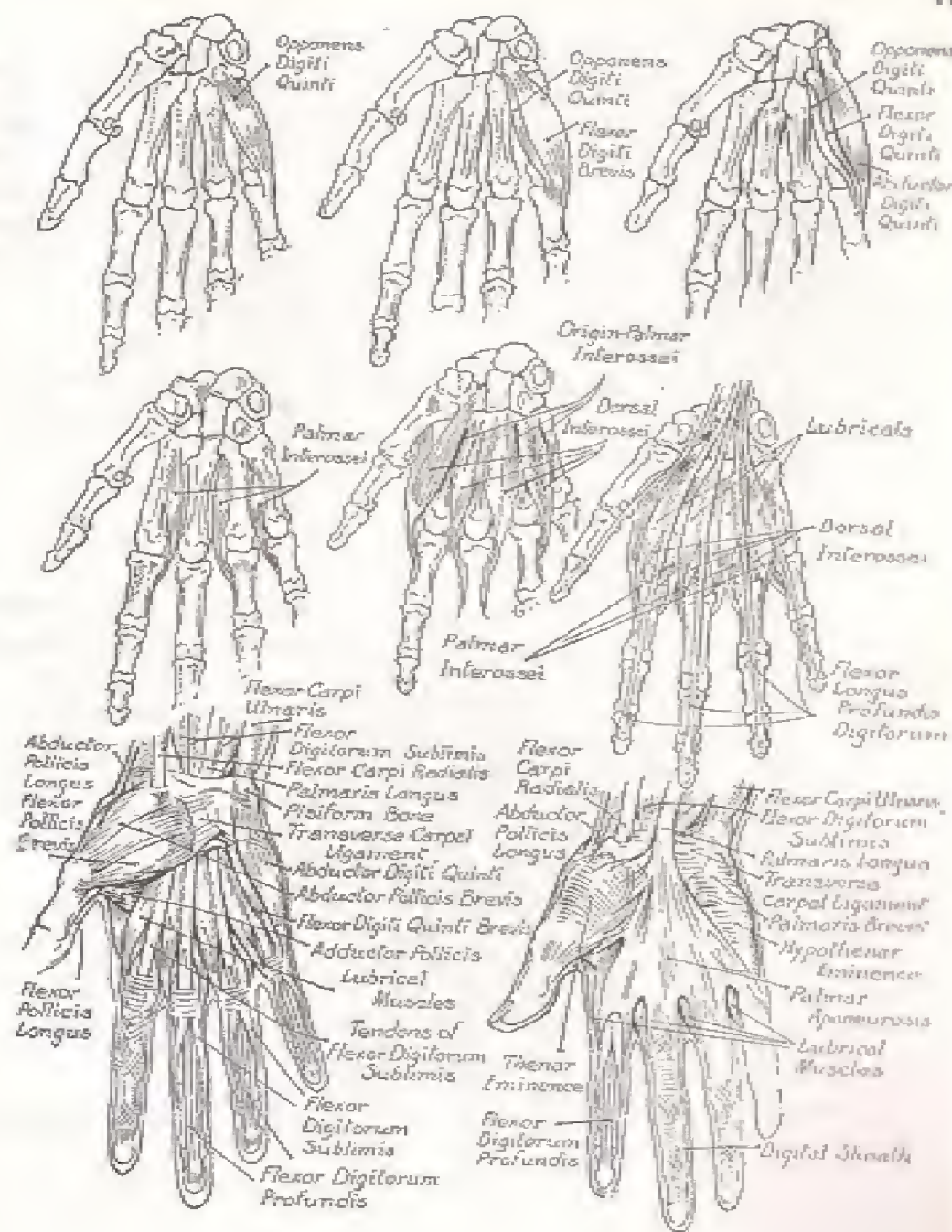
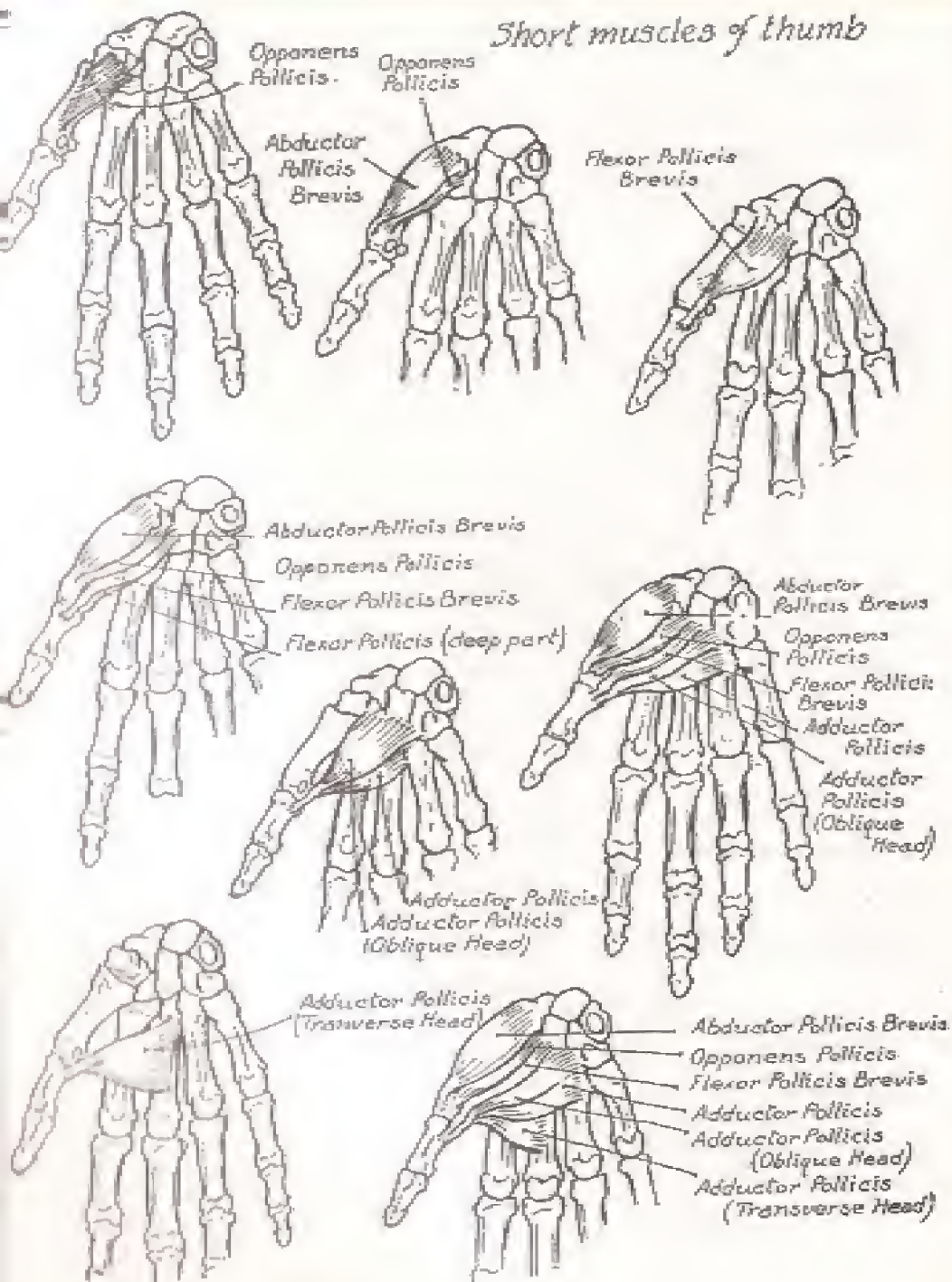
Back Ligaments of Forearm

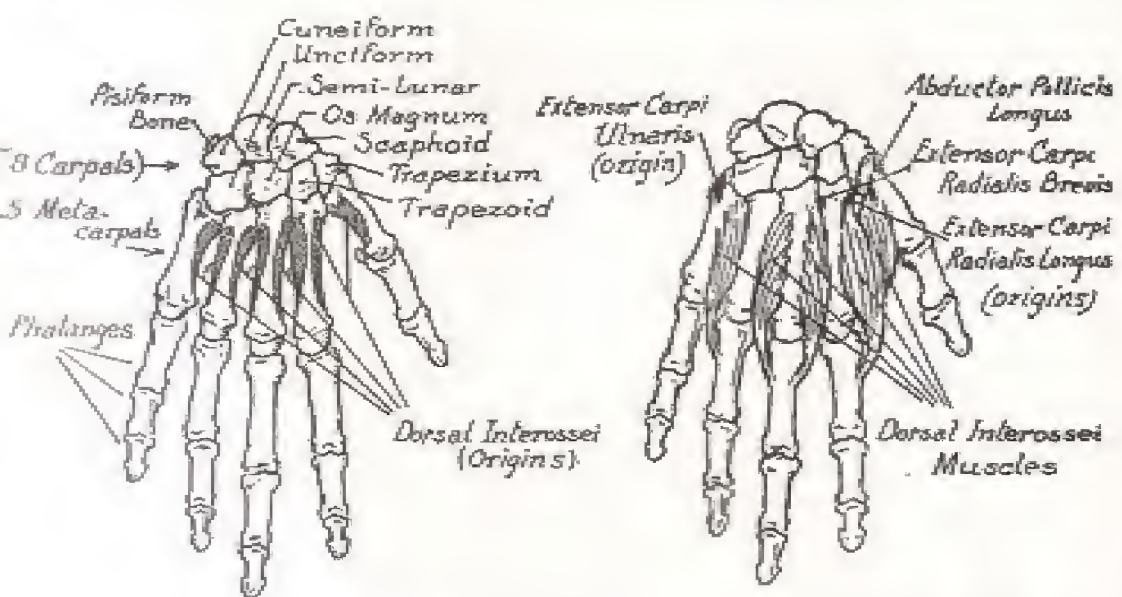
Front



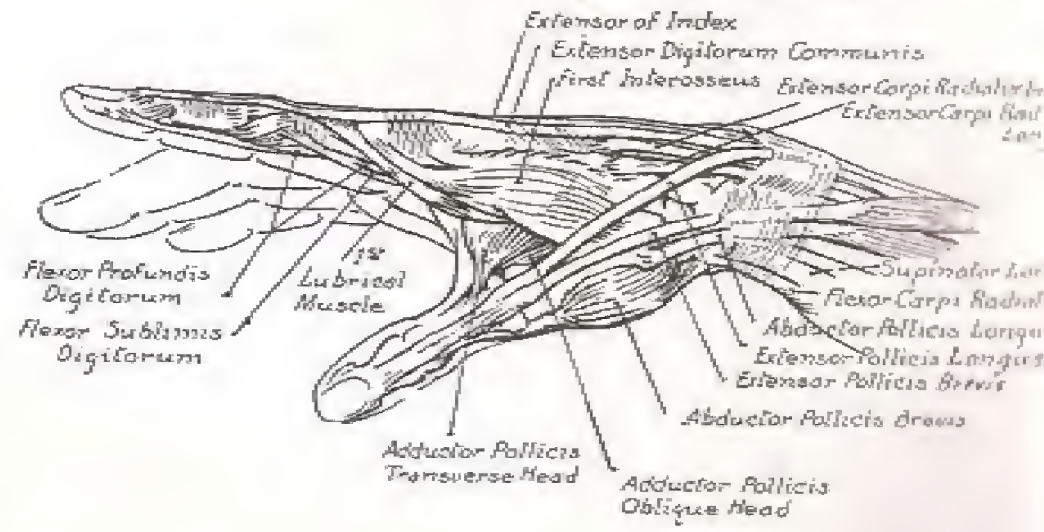
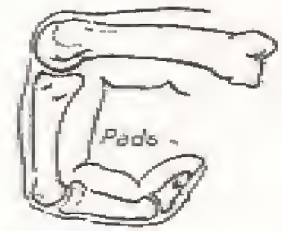
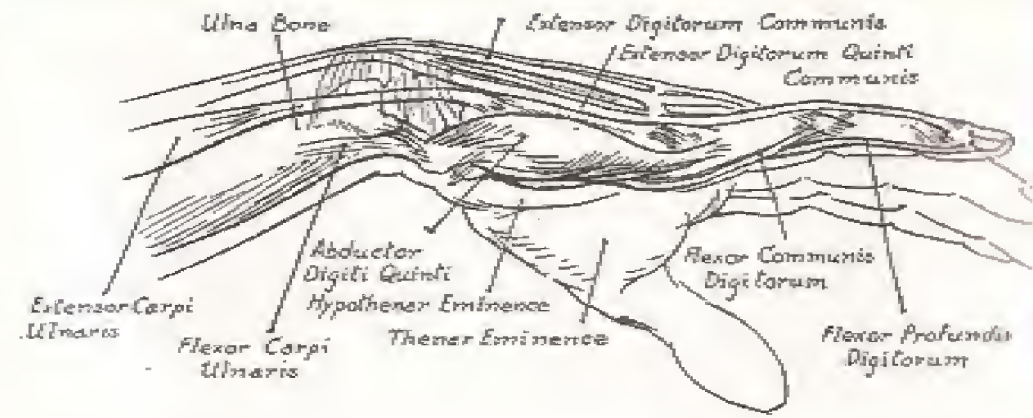
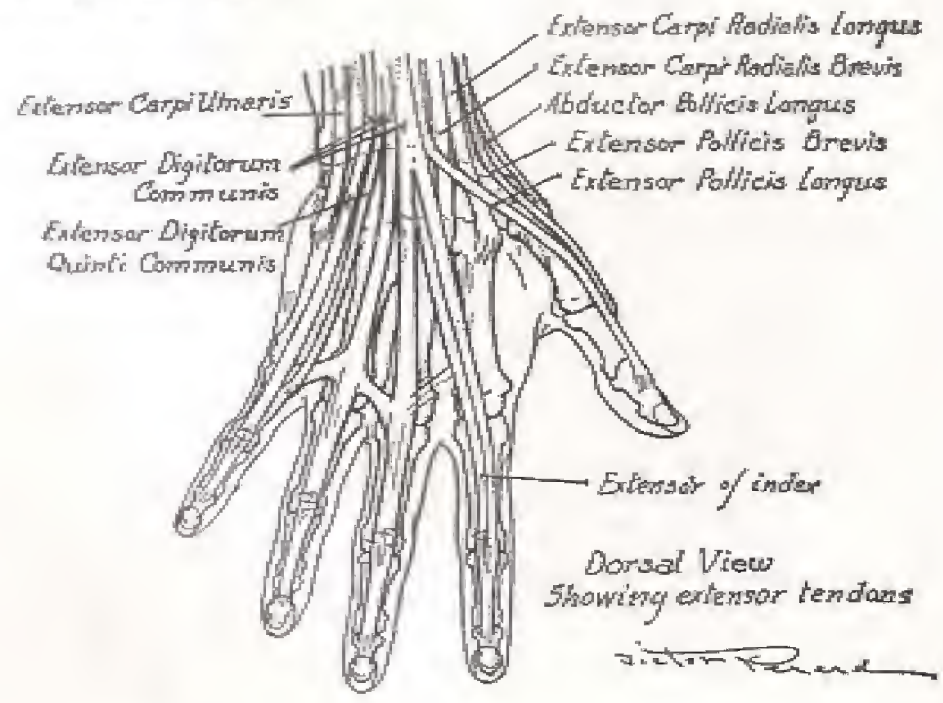


Short muscles of thumb



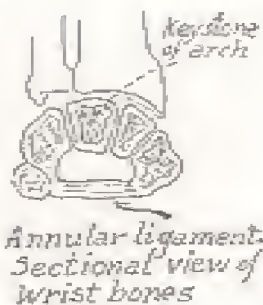


Dorsal View (back)

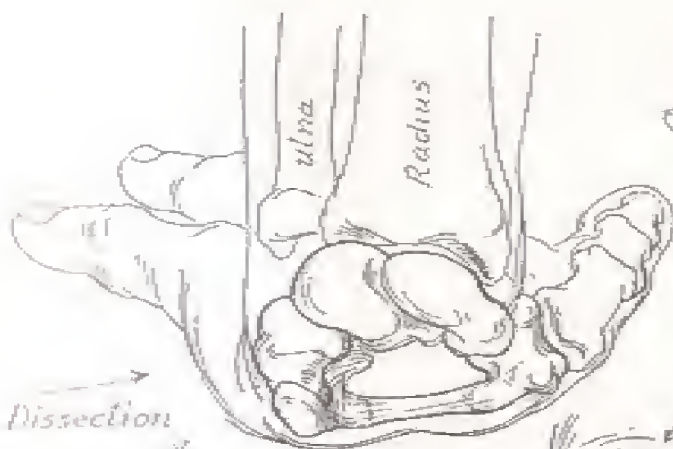




Back view
of wrist



Annular ligament.
Sectional view of
wrist bones



Dissection

The arch formed by the group of wrist bones with the ligament binding the two hook like processes. This forms a canal through which the tendons of the flexor muscles pass.



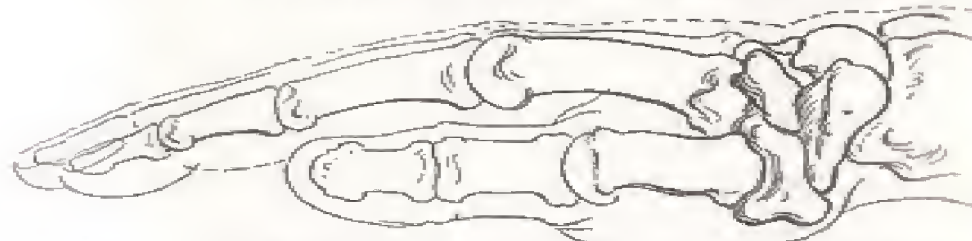
Flexor tendons
passing under the
arch of the wrist
bones.

The back of the hand becomes more convex as it nears the wrist.



The thumb reaches
the second joint

When the hand is resting on a flat surface, the wrist does not come in contact with that surface.

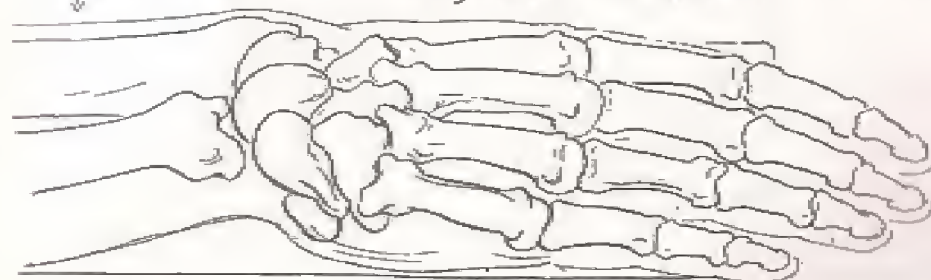


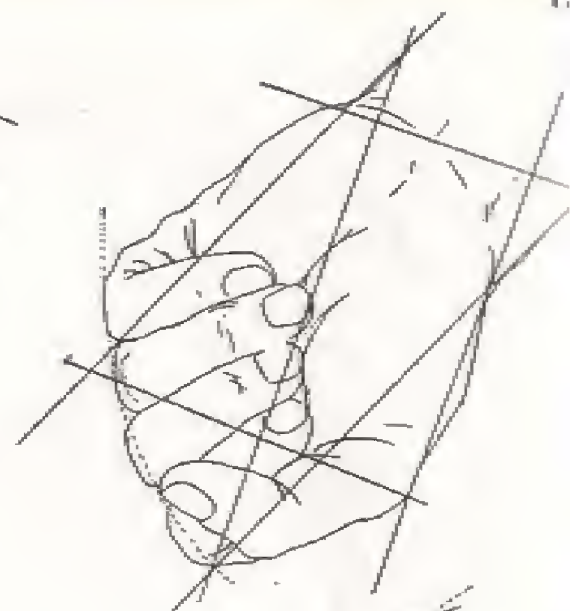
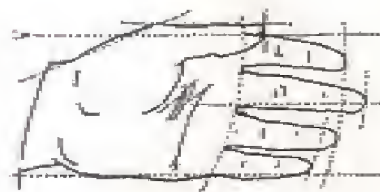
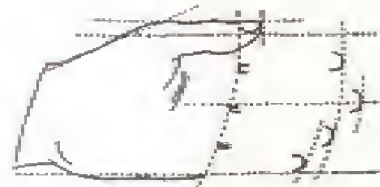
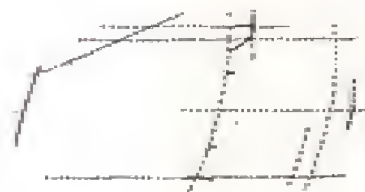
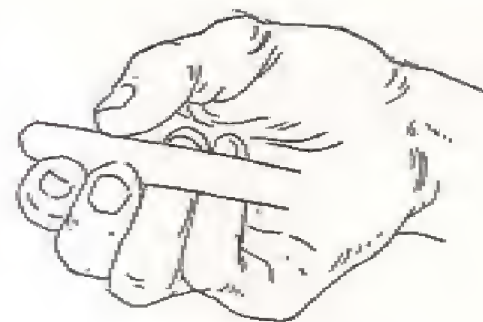
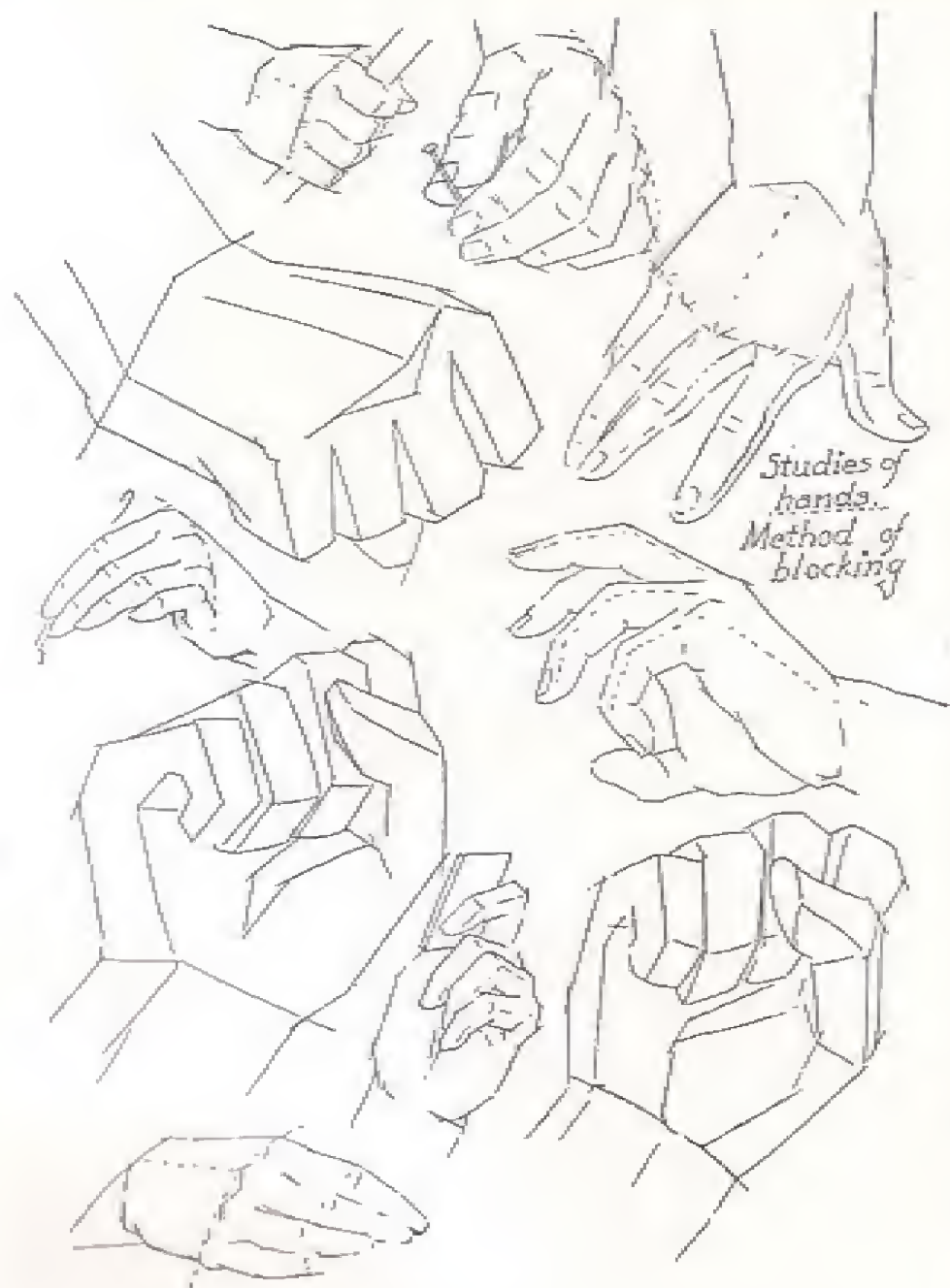
The wrist bones are grouped far into the wrist forming the arch of the wrist.



Woman's hand

Relative positions of the bones from the little finger side when the hand is resting on a flat surface.

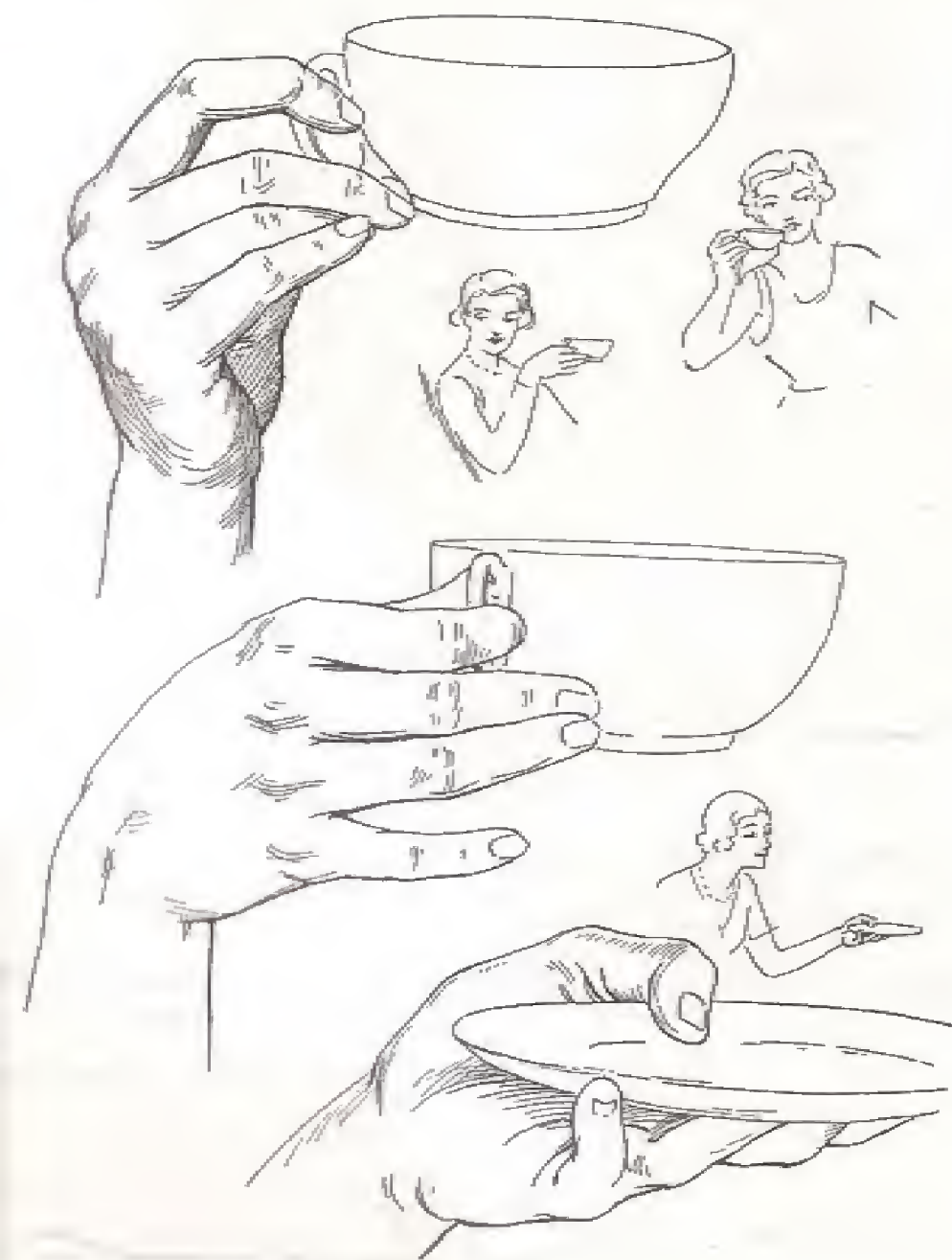


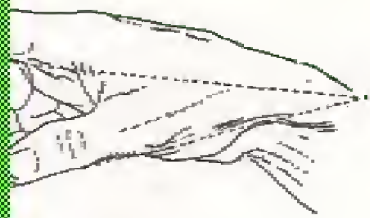


*Showing the use of imaginary lines
to obtain proportion*

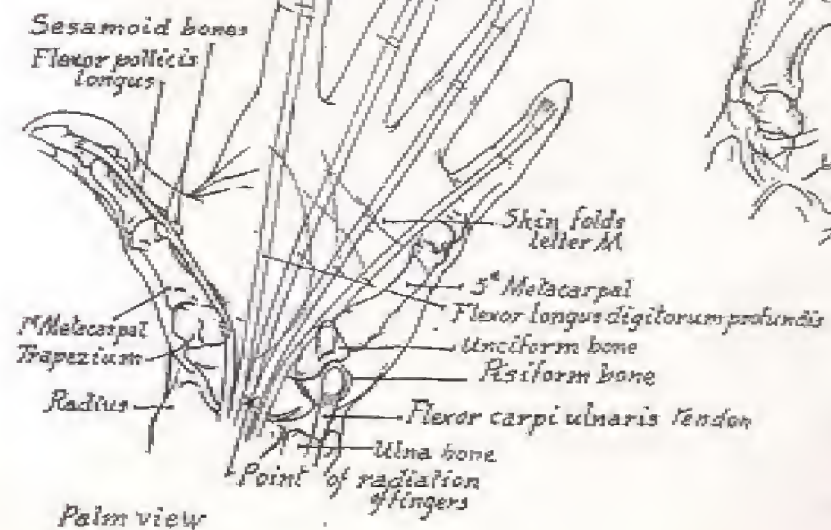


Victor Peruch





of imaginary lines
tion



Palm view

